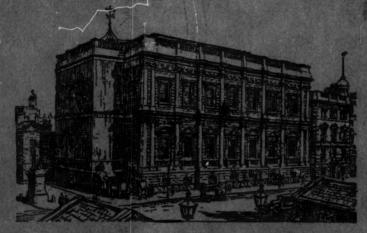
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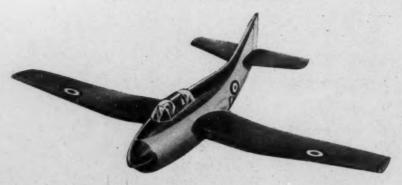
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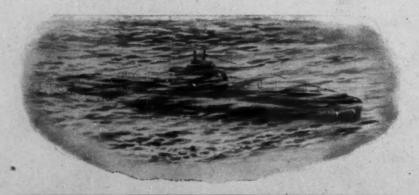
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Squadron Leader F. H. A. Campbell, R.A.F.

Flight Lieutenant L. W. Cotter, R.A.F.

This materially mesets the lastic Flight Lieutenant Eric Lee, D.F.C., R.A.F.

Flight Lieutenant E. D. Mackay, R.A.F.

Flight Lieutenant R. G. Milton, A.F.C., R.A.F.

Flight Lieutenant J. A. Reddington, R.A.F.

Squadron Leader S. Robinson, R.A.F.

Wing Commander P. R. M. Williams, R.A.F.

Flight Lieutenant H. Taswell, R.A.F. Flight Lieutenant J. G. Wilson, R.A.F.

Squadron Leader P. W. Helmore, D.F.C., A.F.C., R.A.F.

Squadron Leader A. Yates, R.A.F.

Flight Lieutenant C. F. Wright, R.A.F.

Flight Lieutenant D. R. Ware, D.F.C., R.A.F.

Flight Lieutenant A. F. Ransford, R.A.F.

Flight Lieutenant A. F. Ransford, R.A.F.
Flight Lieutenant P. D. Cherry, D.F.C., D.F.M., R.A.F.

Flight Lieutenant A. F. Wallace, A.F.C., R.A.F. Group Captain C. H. E. Lyster, M.B.E., R.A.F.

Flight Lieutenant P. C. Mellett, R.A.F.

Flight Lieutenant H. T. Brown, D.F.C., R.A.F.

Flying Officer R. J. M. Baron, R.A.F.
Squadron Leader J. C. Stevenson, R.A.F.

Squadron Leader J. S. Owen, R.A.F.
Squadron Leader J. T. Lawrence, A.F.C., R.A.F.

Squadron Leader W. R. Williams, D.F.C., R.A.F.

Flight Lieutenant J. C. Woods, R.A.F.

Squadron Leader J. P. Beale, R.A.F.

Flight Lieutenant A. D. Boyle, R.A.F.

Flying Officer P. G. Harding, M.B.E., R.A.F. Regiment.

Wing Commander C. H. Simpson, R.A.F.

Wing Commander H. J. A. Thewles, O.B.E., R.A.F.

Flight Lieutenant R. W. Lawson Young, R.A.F. Squadron Leader D. S. Sanderson, R.A.F. Flight Lieutenant P. P. Walker, R.A.F.

#### PRIZE MEMBERSHIP

Free membership for five years is now awarded to one officer in each Passing Out Course from the Royal Naval College, Greenwich, the Royal Military Academy, Sandhurst, and the Royal Air Force College, Cranwell.

Three nominations per annum for these memberships can be made by the President of the Royal Naval College and the Commandants of the other two Colleges.

The following awards have been made in 1949:-

NAVY

Sub-Lieutenant J. J. Streatfeild-James, R.N.

ARMY

2nd Lieutenant J. D. Pierce.

AIR FORCE

Pilot Officer C. H. Walker. Pilot Officer A. N. H. Heap.

#### COVENANTED SUBSCRIPTIONS

The Council hope that many more Members will support the Scheme for Covenanted Subscriptions, details of which have been circulated to all Members.

This materially assists the Institution because it enables Income Tax at the full current rate to be reclaimed on each subscription.

To date, there are 1,497 Annual and 755 Life Covenanted Members.

Any Member who has not received his copy of the Scheme or who requires new forms is requested to communicate with the Secretary.

#### LIAISON OFFICERS

With the object of making the facilities afforded by membership of the Institution better known to the Services, the Council have invited the principal Commands at Home and Overseas to nominate Liaison Officers.

It is also hoped that the Liaison Officers will be able to suggest, from time to time, ways in which the Institution can be of greater value to the serving officer.

Liaison Officers have been provided with Particulars of the Institution and forms to enable them to enrol members without further formality.

The following is a list of officers who have been nominated as Liaison Officers and the Commands or Establishments they represent:—

ishment or Comman	OF	stablishment
<i>изитени оу Сотта</i>	OY	siaomsnment

Name

Combined Operations Headquarters
School of Combined Operations ...
Joint Services Staff College ...
Major P. E. C. Tuckey.

#### NAVY

Home Fleet ...

Flag Officer Air (Home) ... ... Commander R. C. Haskett-Smith, D.S.O., R.N.

R.N. College, Greenwich ... ... Lieutenant-Commander T. S. Sampson, R.N.

Flag Officer, Scotland and Northern Commander J. M. Rowland, D.S.O., R.N.

Ireland.

H.M.S. "Excellent" ... Lieutenant-Commander A. D. Bulman, R.N.

H.M.S. " Dryad "	Lieutenant-Commander V. N. Graves, D.S.C., R.N.
Flag Officer, Submarines	Captain J. E. Slaughter, D.S.O., R.N.
Reserve Fleet	Commander G. F. Blaxland, O.B.E., R.N.
R.N. Barracks, Chatham	Lieutenant-Commander G. Wardle, M.B.E., R.N.
R.N. Barracks, Devonport	Commander E. G. Roper, D.S.O., D.S.C., R.N.
R.N. Barracks, Portsmouth	Lieutenant-Commander M. F. R. Ainslie, R.N.
R.M. Barracks, Chatham	LieutColonel J. M. Phillips, R.M.
R.M. Barracks, Eastney	Captain J. L. Carter, R.M.
R.M. Barracks, Plymouth	Major T. M. Gray, D.S.O., M.C., R.M.
Mediterranean Station	of the Price Strategic Strategic Land

#### ARMY

Anti-Aircraft Command	 	LieutColonel A. J. C. Block, D.S.O., R.A.
Eastern Command		LieutColonel C. T. W. Hill.
Northern Command	 	LieutColonel N. C. Stockwell.
Scottish Command	 	LieutColonel G. M. Forteath, D.S.O., M.B.E.
Western Command	 	Major J. S. Freeland.
Southern Command	 	LieutColonel E. W. H. Grimshaw, D.S.O.
London District	 	Major M. J. O'Cock, M.C.
Northern Ireland District	 	Major J. S. Campbell, R.A.
British Troops in Austria	 	LieutColonel L. H. Spicer.
B.A.O.R	 	LieutColonel S. R. M. Hamblin.
Far East Land Forces	 	LieutColonel A. P. Trevor.

#### ROYAL AIR FORCE

Bomber Command		Wing Commander R. D. Stubbs, D.F.C.					
Fighter Command	MILES TOWN	Wing Commander G. J. Priest.					
Coastal Command		Group Captain M. F. D. Williams, D.S.O.					
Flying Training Comman	d	Wing Commander C. G. Milne, D.F.C.					
Technical Training Comp	nand	Squadron Leader S. Packe.					
Transport Command		Wing Commander C. V. Winn, D.S.O., D.F.C.					
Maintenance Command		Group Captain C. H. E. Lyster, M.B.E.					
Far East Air Force		Wing Commander W. N. Elwy-Jones.					
Reserve Command	10110	Air Commodore R. H. Spaight, C.B.E.					
H.O. Rhodesian Air Train	ing Group	Squadron Leader K. I. Sewell, A.F.C., D.F.M.					

#### TRENCH GASCOIGNE PRIZE ESSAY COMPETITION, 1949

The Council, having received the reports of the Referees, have decided that none of the essays submitted for this Competition is up to the standard which would justify the award of the Gold Medal of the Institution. They have awarded the following prizes:

First Prize of 30 Guineas to Lieut-Colonel W. G. F. Jackson, R.E.

Two Prizes of 10 Guineas each, to Lieut-Colonel H. G. Croly, R.A., and Major H. C. Tuzo.

The following Essays were received:-

- "Sir Brian woke one morning and he couldn't find his battleaxe."
- "Rikki-Tikki . . . sat back on his tail."
- " Platybasia."
- " Thus Far."
- " In Cuade Venenem."
- "Behold, I will make thee a new sharp thrashing instrument having teeth."

#### SECRETARY'S NOTES \*

n

- "Necessitas non habit legem."
- " Pace et Bello Pararat."
- "Sursam Cauda."
- " Qui nimis capit parum stringit."
- " Adapt or perish."
- "Strength for battle."
- "Errors like straws on the surface flow.
  - He who would search for pearls must dive below."
- "Only a fool learns by his own experience."
- "Those behind cried forward."
- " Power corrupts."
- " Deo Juvante."

#### TRENCH GASCOIGNE PRIZE ESSAY COMPETITION, 1950

Particulars of this competition will be found in the leaflet in this IOURNAL.

#### MUSEUM

#### ADDITIONS

Uniform of Surgeon-Major H. A. Oldfield, I.M.S., 1866 (9441). Given by Miss C. M. M. Oldfield.

A Limpet Mine as used by the Special Boat Section (9442). Given by the Commandant, Amphibious School, R.M.

A Sword reputed to have been worn by Tippoo Sahib at Seringapatam, 1799 (9443). Given by Mrs. T. Hardcastle.

A Gold Watch which belonged to Lieut.-General Sir Hudson Lowe (9444). Given by Lady F. D. MacAlister and Miss J. S. Seaton.

A 6 in. Tampion Ship's Badge of H.M.S. "Mauritius" (9445). Given by Captain T. J. N. Hilken, R.N.

A Miniature of Field-Marshal the Duke of Wellington (9446). Given by Major A. M. Cohen.

A Model of a depth charge thrower, invented by Mr. L. Newitt (9448). Given by Lieut.-Colonel C. L. Newitt.

An oil painting of Major Edward Wildman (9449). Given by Major Peter Young, D.S.O., M.C. (Transferred from Long Loan.)

Relics of the old H.M.S. "Implacable" (9450). Given by the Admiralty.

#### WANTED

The following cross-belt pouches are wanted in order to complete the sets of pouches and sabretaches in the Museum. Will Members who have any of these to spare please communicate with the Curator :-

3rd King's Own Light Dragoons.

10th Royal Hussars.

The Royal Gloucestershire Hussars.

8th Hussars.

13th Hussars.

18th Hussars.

Sir Stran union one morning and he could \*21st Hussars. 1861 to 1864. 21st Hussars. 1864 onwards.

2nd West Yorkshire Yeomanry Cavalry.

The Yorkshire Hussars.

The Royal East Kent Yeomany Cavalry.

#### **JOURNAL**

Members are invited to offer suitable contributions for the JOURNAL. Confidential matter cannot be used, but there is ample scope for professional articles which contain useful lessons of the War; also contributions of a general Service character, such as Strategic Principles, Command and Leadership, Morale, Staff Work, Naval, Military and Air Force History, Customs and Traditions.

The Editor is authorized to receive articles from serving officers and, if found suitable, to obtain permission for their publication from the appropriate Service Department.

Army Officers are reminded that such articles must be accompanied by the written approval of the author's Commanding Officer.

#### REQUEST FOR BACK NUMBERS

The Editor will be grateful if Members who have finished with them will return copies of the JOURNAL for August, 1942, February, August and November, 1946, May and August, 1947, and February and August, 1949.

#### BOUND VOLUMES OF THE JOURNAL

There are a few bound copies of the JOURNAL from 1900-1929 for disposal. Most of these are in good condition. Offers for individual volumes should be made to the Secretary.

#### CHANGES OF ADDRESS

Members are particularly requested to notify any change of address which will affect the despatch of the JOURNAL.

Naval Officers are strongly advised to keep the Institution informed of their address, as JOURNALS sent to them via C.W. Branch of the Admiralty are invariably greatly delayed.

#### FOR SALE

#### THE NEW NAVAL SIGNAL CODE

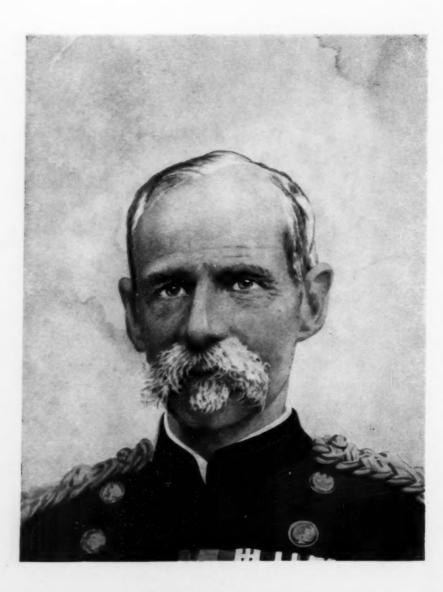
A limited number of spare copies of the coloured frontispiece of the JOURNAL for November, 1948, showing all the flags of the New Naval Signal Code, are available to members at 1s. each, post free.

#### "WHAT TO READ"

The articles in the JOURNAL on "What to Read" have been published in pamphlet form. Copies can be supplied, price 1s. 6d., post free.

#### "THE STRATEGY OF THE SOUTH-EAST ASIA CAMPAIGN"

Owing to the demand for copies of the above-named lecture by Admiral the Viscount Mountbatten of Burma, arrangements have been made for a reprint, with the appropriate pull-out map. Copies will shortly be available, price 2s. 6d. post free.



THE LAST COMMANDER-IN-CHIEF OF THE ARMY FIELD MARSHAL THE EARL ROBERTS OF KHANDAHAR V.C., K.G., K.P., G.C.B., O.M., G.C.S.I., G.C.I.E. (From the original in the R.U.S.I.)

# THE JOURNAL

# Royal United Service Institution

Vol. XCV.

FEBRUARY, 1950.

No. 577.

Authors alone are responsible for the contents of their respective Papers. All communications, except those for perusal by the Editor only, should be addressed to the Secretary, Royal United Service Institution.]

#### FIFTY YEARS AGO

THE last half century has seen such momentous changes in the Services that it is worth recalling what they were like, what was happening in them, and who were the most notable personalities fifty years ago.

Her Majesty Queen Victoria was nearing the end of her great reign-she died in January, 1901. She had already been Patron of the Royal United Service Institution for over sixty years, and in 1891 had marked her interest in and approval of its work by granting the use of the old Banqueting House of Whitehall Palace "in appreciation of the benefits derived from the Institution by the Navy and Army." On the strength of this, the Council had acquired a long lease from the Crown of a plot of land at the South end of the Banqueting House, on which the new Institution building was erected.

The memorial stone of this building was laid in 1893, and the premises as they now stand were opened in 1805, by H.R.H. the Prince of Wales-afterwards King Edward VII—who, at the opening of the new Century, was still the Institution's Vice-Patron. At that time there were a number of other Vice-Patrons, among them H.R.H. the Duke of Connaught and Admiral of the Fleet the Hon. Sir Henry Keppel.

The President of the R.U.S.I. was H.R.H. the Duke of Cambridge.

A notable event in the annals of the Institution was the presentation in May, 1900, of the first Chesney Gold Medal to Captain A. T. Mahan, U.S.N., in consideration of his three great works-The Influence of Sea Power upon History, The Influence of Sea Power upon the French Revolution and Empire, and The Life of Nelson.

#### THE SOUTH AFRICAN WAR

The year 1900 saw the turn of the tide towards final victory for British arms in the war against the Boers for South Africa, which had begun so disastrously in the Autumn of 1899. General Buller, who had been sent out with reinforcements, had sustained a series of set-backs, and British forces were besieged in Ladysmith, Kimberley and Mafeking.

Field-Marshal Lord Roberts, who had been appointed Commander-in-Chief in South Africa in the previous December, with Major-General Kitchener as his Chief of Staff, having arrived at Cape Town, left there for the front on 7th February, 1900.

Strong reinforcements were poured into the Country during the first half of the year. These included Regulars, Militia, Yeomanry, Volunteers and Colonial troops. At home, although patriotism was great, the defeats and losses had caused much

depression and criticism of the War Office and commanders in the field. Hopes revived with Lord Roberts' appointment. They were justified by the following calendar of events:—

15th February.—Kimberley, besieged since October, 1899, was relieved by the cavalry division under Lieut.-General French (afterwards Lord French of Ypres).

27th February.—One of the most successful enemy commanders—Cronje, surrendered unconditionally, with about 4,000 prisoners at Paardeberg.

28th February.—Ladysmith, which had been gallantly defended by Lieut.-General Sir George White since it was invested early in the previous November, was entered by Lord Dundonald with the Natal Carbineers and Imperial Horse, Buller with reinforcements arriving later.

13th March.-Lord Roberts entered Bloemfontein.

18th May.—Mafeking, with its brave garrison under Major-General R. Baden-Powell, which had been besieged for seven months, was relieved by a flying squadron under Colonel Mahon. (Londoners, particularly, showed their relief and appreciation by ill-restrained jubilation.)

28th May.—Lord Roberts annexed the Orange Free State in the name of the British Government and it was re-named the Orange River Colony.

31st May.-Lord Roberts entered Johannesburg.

5th June.-He captured Pretoria.

1st September.—The Transvaal Republic was formally annexed to Great Britain by Lord Roberts.

20th October.—Kruger—the Boer President, having escaped to Lorenço Marques, embarked in a Dutch cruiser in which he was taken to Europe.

25th October.—The South African Boer Republic was formally annexed and styled Transvaal Colony.

These successes were only achieved after very hard fighting against an enterprising and determined enemy under able leaders, who had the great advantage of intimate knowledge of the ground and a natural aptitude for guerrilla warfare. Nor did they imply that the fighting was over.

On 29th November, Kitchener—who, though originally appointed as Roberts' Chief of Staff had been increasingly employed in active commands, took over the supreme command from his chief, who was designated for Commander-in-Chief of the Army in succession to Field-Marshal Lord Wolseley, and sailed for England on 11th December.

The new C.-in-C. South Africa—promoted to Lieut.-General, with local rank of General, had the very difficult task of carrying on the war against elusive Boer forces under the bold and skilful leadership of commanders like De Wet, Botha and Smuts. He introduced the system of blockhouses which proved effective in preventing the concentration of enemy forces.

It was not till 31st May, 1902, that the final unconditional surrender was signed by the Boers before Lord Milner—the Governor, and Kitchener at Pretoria. It was a portent of better things to come that the British terms provided for an imperial grant of £3,000,000 and loans for Boer repatriation; no death penalty on rebels; and the Dutch language to be used in law courts when necessary. Two days later,

Kitchener congratulated the Boers on the good fight they had made and welcomed them as citizens of the British Empire.

#### THE BOXER TROUBLES IN CHINA

The war in South Africa somewhat distracted attention from the nominally cold war which Britain, Austria, France, Germany, Italy, Russia, the United States, and Japan were waging with a tortuous and not very effective Chinese government during 1900. Massacres of Europeans, especially missionaries and their families, including many British, were attributed to an anti-foreign and anti-Christian sect known as Boxers (Red Fist). The Dowager-Empress of China was the ruling power at this time and tried to pacify the Allies by issuing edicts for the suppression of the rebels; but these were so evasive and ineffective that it could only be assumed that she was secretly in sympathy with, if not aiding and abetting, the Boxers' activities.

The situation became so tense that the Foreign Legations in Peking appeared to be in danger of extermination. On 31st May, 340 marine guards, including 75 British, arrived in the city. On 6th June, railway communication to Peking was stopped, as foreign reinforcements, including 900 Royal Marines, were being landed at Tientsin.

On 9th June an Imperial edict decreed a massacre of foreigners. This was changed to a protective edict by three members of the Tsung-li-Yamên,¹ who paid for their intervention by being cruelly executed two months later. The next day a force of 2,000 European troops—including 915 British—under Vice-Admiral Sir Edward Seymour, C.-in-C. of the China Station, left Tientsin by train to force a way to Peking. They were at once opposed by the Boxers, who were successfully engaged at Lang-fang.

Meanwhile, on 17th June, a combined European fleet successfully bombarded the Taku forts, which were subsequently taken.

The Dowager-Empress now issued a number of anti-foreign decrees, including an expulsion order.

Seymour continued to try to rescue the Legation in Peking, but on 29th June, was forced to retire on Tientsin, where fierce fighting took place early in July.

On 14th August, the young Emperor and Dowager Empress having removed with the Court to a place of safety, the siege of the Legation in Peking was raised. Brigadier-General Gaselee and his Sikhs were the first to arrive, closely followed by the Americans. A British force defeated Chinese Boxers in the park, Peking, on the 20th, and on 28th August the Allies occupied the Imperial palace.

Negotiations with the evasive Emperor, with the sinister Dowager-Empress prompting him, dragged on until the end of the year, when he was forced to accept "twelve irrevocable conditions" laid down by the Allies.

The bloodthirsty acts which provoked this fighting were not entirely confined to the Chinese or even the Boxers. During the months of October and November, the Russians were responsible for the indiscriminate slaughter of 5,000 Chinese, thrown into the Amur.

#### THE NAVY

The Navy took an active part in the South African War. Ships on the station included the large protected cruisers "Terrible" and "Powerful," the smaller

<sup>&</sup>lt;sup>1</sup> Board of Foreign Affairs,

cruisers "Doris," "Thetis," "Forte," "Philomel," "Barrosa" and "Tartar," and the old battleship "Monarch"—depot ship.

These provided three Naval Brigades—the Western under Captain Prothero of 400 officers and men and two 12-pdrs. took part in the relief of Kimberley; the second, under Captain the Hon. Hedworth Lambton with two 4.7-in and four 12-pdr. guns and 283 of all ranks was in Ladysmith throughout the siege; the third, under Captain Percy Scott, with over thirty guns, was organized to defend Durban; part of this brigade later joined the Ladysmith relief column.

Thanks chiefly to the ingenuity of Captain Scott a large number of 12-pdrs, several 4.7-in., and a 6-in. Q.F. naval guns were landed on extemporized mountings and did valuable service

Fifty years ago, the Navy was still suffering from a hangover of the sailing era, although it was far advanced in steam with its attendant material developments of construction and armaments. Unfortunately, strategical and tactical thought and technical knowledge, especially among the majority of senior officers, had not kept pace with these changes; smartness of a ship's appearance and at seamanlike evolutions were still the criterions of efficiency. Only a few more enlightened and imaginative officers were beginning to regard fire effect as the object of all battle tactics and the armament as the raison d'etre of the ship.

Pre-eminent among these pioneers was Vice-Admiral Sir John Fisher, who had lately been appointed Commander-in-Chief of the Mediterranean Fleet. Captain Percy Scott had begun to make a name for himself by his methods for improving Prize Firing—individual gun-laying and firing at ranges of 1,000 yards or less, but Fisher was already devoting his attention to battle firing, and instituting target practices at ranges which had not hitherto been contemplated: the 3,000 yards, which was accepted as the effective range for heavy guns, became 5,000 and eventually 7,000 yards. But fire control, as it is understood to-day, was almost non-existent then and for many years yet to come; all guns were laid by individual gunlayers instead of by a master director, with the inevitable chaos and inaccuracy.

The Channel Fleet, with Vice-Admiral Sir Harry Rawson in command, was still doing "steam tactics," especially the spectacular but quite useless "gridiron" movement. Fisher's fleet exercises were all devoted to the perfection of manoeuvres which would be of value in battle.

In those days, France was the potential enemy, with Russia as a probable confederate. French torpedo craft were regarded as a serious menace to our battle fleets, especially in the Mediterranean, and the anti-t.b. organization in our larger ships—known as "Man and Arm Ship," included the manning of all small guns from maxims to 6 pdrs. (but nothing heavier) and parties of marines with rifles.

"Repel Boarders" (with rifles, cutlasses, and boarding-pikes) and "Prepare to Ram" were still provided for in the main action stations, known as "General Quarters."

Battleship design was wedded to the stereotyped mixed armament of two dual 12 in. turrets and twelve 6 in. guns—in itself a symptom of lack of realization of battle conditions and requirements. The "Dreadnought," with her one-calibre main armament, the sign-post to a new Navy and the first child of the Father of the Modern Fleet—Fisher, was six years in the future.

<sup>&</sup>lt;sup>8</sup> See "Fifty Years of Warships" in the JOURNAL of February, 1949, p. 51.

Warship engines were all of the reciprocating type; except for the destroyers "Viper" and "Cobra," which were the first warships to be fitted with turbines.

Water-tube boilers were coming into their own, despite much ill-informed criticism in Parliament and the Press, and were first adopted in battleships in 1900, with the "Canopus" class. The curse of coal as the only fuel was still on the fleet. It was to be another fifteen years before all oil was to be adopted in the "Queen Elizabeth" class.

Executive ranks of Sub-Lieutenant and above were the same as they are to-day, except that there were no Lieutenant-Commanders; a Lieutenant on attaining eight years seniority remained in that rank until or unless he was promoted to Commander, although he shipped his additional half stripe.

Engineer Officers were called Chief Inspectors of Machinery, Inspectors of Machinery, Fleet Engineers, Staff Engineers, Engineers and Assistant Engineers.

Medical officers were Inspectors-General of Hospitals and Fleets, and Deputies of that rank, Fleet Surgeons, Staff Surgeons and Surgeons.

The highest rank in what is now known as the S. Branch, was Fleet Paymaster, following on Staff Paymaster, Paymaster, Assistant Paymaster, Clerk and Assistant Clerk—the two latter being the equivalent of Midshipman and Naval Cadet.

The Warrant officers had the time-honoured ranks of Gunner, Boatswain and Carpenter, with the higher rank of Chief in each case.

The Royal Marines were divided into Royal Marine Artillery (Blue) and Royal Marine Light Infantry (Red). When affoat, the Blue Marines manned the heavier guns and the Red Marines the lighter.

#### THE ARMY

Just fifty years ago, Field-Marshal Lord Roberts succeeded Lord Wolseley, to be the last Commander-in-Chief of the Army. Ten years previously the Hartington Commission had virtually recommended the abolition of that post, the formation of a Naval and Military Council, and the creation of a new department under a Chief of the Staff on the Continental model. These proposals were not acted on at the moment, but they had led to the resignation of the Duke of Cambridge.

Lord Roberts remained at the War Office until 1904, when as the result of the recommendations of the Esher Committee, the office of Commander-in-Chief was abolished and the Army Council instituted.

The South African War caught the Army short of guns of position, and these had to be hastily improvised with naval 4.7 in. and 6 in. guns on extemporized field mountings until 6 in., 5 in. and 4.7 in. guns on railway or travelling carriages could be made ready. The 12 pdr. B.L., recently introduced for the artillery, was found to be too heavy for the Horse Artillery, while its shell was too light for Field Artillery duties. It was superseded by a lighter 12 pdr. of wire construction. The old 12 pdr. was converted to a 15 pdr., using a heavier shell and a cordite charge. Lyddite was being increasingly adopted for shells of guns and howitzers. The Maxim machine gun had been introduced in the Army ten years previously. It was a shock to find the Boers with a heavier edition of this, known as the Pom-Pom, which could fire a

Lord Esher, Admiral Sir John Fisher, and Sir George Clarke—Fisher's "Dauntless Three."

<sup>\*</sup> Cordite was introduced about 1890.

string of 1 pdr. shell at a range of nearly 5,000 yards. This was used by us later in the War, but experience showed that the effect was more moral than material.

The extensive use of mounted infantry resulted in the demand for a shorter rifle than the standard Lee-Metford, which would yet provide a thoroughly efficient weapon for fighting dismounted. This produced the Lee-Enfield, with its reduction of five inches in the length of barrel and multiple magazine loading in chargers. This short Lee-Enfield became the standard infantry arm and proved its worth years later in the 1914–18 War.

The Cardwell scheme, which had been brought to fruition by Childers in 1881, was still in force in 1900. It stood up well to the strain of mobilization in 1899, although the War disclosed weaknesses which Cardwell could scarcely have been expected to foresee.

The need for well trained staff officers—and, incidentally, for commanders who knew how to use a staff—was one of the lessons which emerged from that war, with the resultant gain in the importance attached to Staff College training.

Uniform, up to the outbreak of the South African War, had been essentially ornamental and ceremonial. Active service on the *veldt* necessitated the utilitarian khaki, which two Great Wars have made the sealed pattern for the Army's service dress of to-day. Red coats and full dress were naturally laid aside; but they were revived during the ensuing years of peace until the 1914–18 War practically ended them, except for the Household Brigade and regimental bands and drums.

#### THE AIR

Fifty years ago, the only air force in either Service was the balloon section of the Royal Engineers. Although this had been formed twenty years before and had already gone on service in Bechuanaland in 1884, it was not yet a recognized part of the Army. By a lucky chance a balloon observer was able to give Sir Evelyn Wood, then commanding the Aldershot Division, valuable information about an "enemy" column during the 1889 manoeuvres, which led to a successful night attack. Sir Evelyn became a firm supporter of this new organization, with the result that it was formally introduced into the Army.

Four balloon sections took part in the South African War. There was still some prejudice against them and it is alleged that the artillery did not make the best use of the help they could have given. Nevertheless, they did good service in reporting enemy positions and directing fire when they were given the opportunity.

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gain had been introduced within A to be ready browness. "I was I stouch the

\* Lord Edward San Law Lines and such and Edward Strong Str

#### OIL SUPPLIES IN WAR

By Major-General W. E. V. Abraham, C.B.E., B.Sc., F.G.S.

ADMIRAL OF THE FLEET SIR JOHN D. CUNNINGHAM, G.C.B., M.V.O., in the Chair

On Wednesday, 2nd November, 1949, at 3 p.m.

THE CHAIRMAN: It is my pleasure and privilege to introduce to you Major-General Abraham who has been good enough to come here to talk to us to-day.

Major-General Abraham had a very wide experience in "Q" during the War, and is at the present time Joint Managing Director of the Burmah Oil Company, so that his knowledge of oil is very specialized, and his knowledge of supply is very wide.

He commanded a battalion long before the War, and he had the unique experience of starting again in the late war as a Second Lieutenant and finishing up as a Major-General. That shows that he is very competent to lecture to us this afternoon.

#### LECTURE

O prevent any misunderstanding I should like to preface my talk with three statements:

(i) I have been out of the Army for four years and have no recent military knowledge other than what we can all read in the newspapers,

(ii) While I was in the Army I had nothing to do with oil and so anything that I may say to-day about oil in the late war will not be from my own experience but merely what I have since learned.

(iii) The problem of oil supplies in a future war will depend so much on when the war breaks out, and its duration, its geographical extent, and other factors, that it would be quite foolish for me to hazard any prediction as to how "on the day" it would be solved. All that I can wisely attempt is to give you a general picture which may help you to draw your own conclusions from time to time as to what, in different circumstances, is likely to be possible, and I propose therefore to state briefly what crude oil is and how it is produced and refined, then to say something (at second hand as I have already admitted) about oil in the late war, and then to look broadly at the global picture of oil supply and demand, and the consequent peacetime international movement of oil without which no wartime picture can be drawn.

#### CRUDE OIL

What is Crude Oil? Here is a sample and if you were to see it coming out of the oil well the main difference would be that it would be frothing with gas bubbles. Crude Oil is a mixture of a number of different substances, all more or less resembling one another but varying in properties from gases, which fly out of the oil when it is produced, to light mobile liquids (petrol), then somewhat heavier and less mobile liquids (kerosene), then still heavier and more viscous liquids (Diesel oil, etc.), then heavy lubricating oils and fuel oils and even waxes and asphalts which, when separated from the crude oil, are solid at ordinary temperatures.

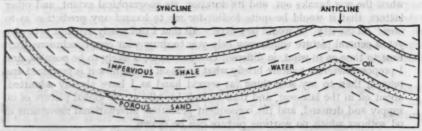
Actually there are many more different substances than I have here indicated—more likely thirty—but they grade into one another, as it were, and if we think of them as the rungs of a tall ladder the topmost few rungs would be gas, the next few rungs would constitute petrol, and next few rungs kerosene, and so on.

#### ORIGIN

Oil is believed to have been formed by the decomposition of organic matter, probably very large numbers of exceedingly small—even microscopic—animals and plants, which were entrapped in sediments laid down on the bottom of shallow seas. Such sediments consist commonly of alternations of clays and sandstones, and it is probable that the oil was formed in the clays and then forced into the more porous sandstone. If we fill a tumbler with sand, tamping it down so that it will hold no more, we may regard the tumbler as being full of sand, but in fact it is possible still to pour into the tumbler a volume of water equal to between a quarter and a third of the volume of the sand. This water occupies the pore space between sand grains and it is in similar minute pore spaces that so-called oil pools normally occur. There is no such thing as an underground lake of oil. Sometimes, and notably in Persia, the reservoir rock is a limestone instead of a sandstone, and in such cases the oil occupies cracks and fissures which tend to be much bigger than the very minute pore spaces in a sandstone.

#### DISCOVERY AND DEVELOPMENT OF AN OILFIELD

The oil was probably formed and forced into porous sandstone under high temperatures and pressures which were due not only to the weight of overlying sediments but to actual earth movement, and commercial deposits of oil are normally found only where the underground rocks have been folded into a dome or anticline, at the top of which the oil being lighter than water, is concentrated and trapped. The search for oil, by geologists and other scientists, consists largely in the search for suitable anticlines. There is, of course, no certainty or even probability that such an anticline will contain oil but, if a sufficient number are tested with the drill in suitable regions, oil will at last be "struck" in quantity and an oilfield will have been discovered.



SECTION THROUGH AN OILFIELD ON A TYPICAL ANTICLINAL STRUCTURE

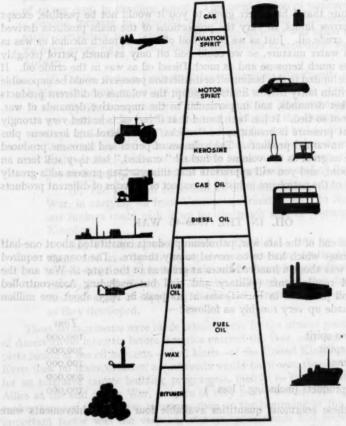
The development of an oilfield by a number of suitably spaced boreholes may spread over five, ten, twenty, thirty or more years, depending on its size and the decline rates of the individual wells. For our present purposes the important thing to note is that even the *maintenance* of production at any level in an oilfield necessitates continuous drilling to offset natural decline, and that a still greater drilling effort is necessary if there is any question of increasing total production rate.

#### REFINING

I described crude oil earlier as a mixture of a large number of related substances which we find it convenient to arrange in groups under the names of petrol, kerosene, etc. The problem of refining is essentially to separate the crude oil into these groups.

Consider a simpler and perhaps better known mixture—whisky and soda, or let us say alcohol and water. If we should wish to separate alcohol from water in

a glass containing both, it is possible by heating the mixture in a suitably contrived apparatus to boil off a vapour containing a greatly increased proportion of alcohol, leaving most of the water behind. By leading off the vapour through a tube into another vessel at ordinary room temperatures, the vapour will condense to a liquid richer in alcohol. By carefully conducted repetitions of this process we can separate the alcohol from the water.



PRODUCTS OF CRUDE OIL

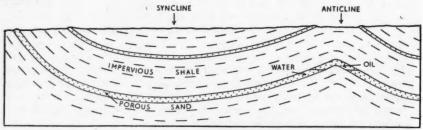
The same principle applies to the mixture known as crude oil. The lightest substances are gaseous and come out of the oil automatically at ordinary temperatures and pressures. If we now heat the oil a little, the substances which form petrol will come off as vapour. If we apply still more heat, the substances which form kerosene will vaporize, and so on. The residue after a considerable amount of heat has been applied is normally fuel oil but may contain wax or asphalt. This is an oversimplification of what happens, but it is essentially correct. In practice many more separate "fractions" (as they are called) are boiled off in this way than I have suggested and, by an ingenious system, all of the fractions are boiled off simultaneously and condensed and collected separately from different levels in a high tower.

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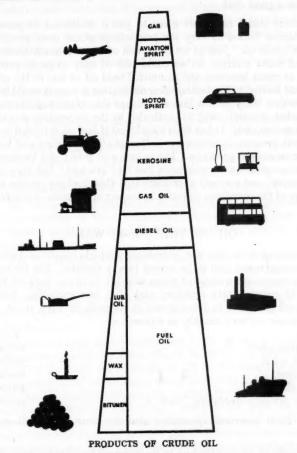
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Some of the fractions are almost ready for use as they are boiled off and condensed, but usually some further treatment is necessary. Certain substances have usually to be added to petrol to improve its anti-knock properties, and Aviation Spirit in particular is a tailor-made product which can never be put into an aeroplane just as it is taken from a crude oil. Kerosene and gas oils and Diesel oils of various kinds do not as a rule require very much treatment subsequent to distillation, but lubricating oils may require a great deal.

In the picture that I have here given to you it would not be possible, except within fairly narrow limits, to vary the proportions of the main products derived from any given crude oil. Just as we could boil off only as much alcohol as was in the alcohol and water mixture, so we could boil off only as much petrol (roughly speaking) and as much kerosene and as much Diesel oil as was in the crude oil. If therefore we were limited to this boiling off or distillation process it would be impossible (again except within fairly narrow limits) to adapt the volumes of different products to varying market demands, and in particular to the imperative demands of war. Luckily we are not so tied. It has been found that if fuel oil is heated very strongly under very great pressure it breaks up or "cracks" into petrol and kerosene plus coke and other unwanted products. The volumes of petrol and kerosene produced are nothing like as great as the volume of fuel oil "cracked," but they still form an appreciable amount, and you will appreciate that this cracking process adds greatly to the flexibility of the petroleum industry in respect of volumes of different products required.

#### OIL IN THE 1939-45 WAR

Towards the end of the late war, petroleum products constituted about one-half of the total tonnage which had to be moved to any theatre. The tonnage required in war theatres was about a hundred times as great as in the 1914–18 War and the resultant World requirements (military and civil but excluding Axis-controlled Countries and oil produced in Russia) was at its peak in 1945, about one million tons per day, made up very roughly as follows:—

								Ions
Aviation s	pirit	***	***	• • •	***	***		100,000
Motor spir	it	***	***	***	•••	***	***	300,000
Kerosene		***	***	***			***	100,000
Fuel oils		•••	•••	•••	***	***	***	400,000
Other prod	ducts	(includ	ing "le	oss ")	***		***	100,000

To make these enormous quantities available four main achievements were necessary:—

- (a) Crude oil production had to be increased by about a third from its prewar figure of something like three-quarters of a million tons per day. This, as you will appreciate from what I have already said, meant greatly intensified drilling programmes. The main increase was in America although the percentage increase was actually greater in the Persian Gulf.
- (b) Refinery capacity had to be similarly increased. This was done not so much by building new refineries (though this also was necessary) as by making fuller use of existing refineries, treating all Allied refinery capacity outside of Russia as a single whole, and putting each individual refinery to the best possible use for the common good.

- (c) Special arrangements had to be made for particular products, and above all for Aviation Spirit, the output of which had to be increased no less than ten times, and the quality of which was increased from 87 octane to 100 octane. This increase in the so-called octane number is the technical way of indicating an improvement of anti-knock quality, and it may mean more to you if I say that a change from 87 to 100 octane makes possible higher compression and means a reduction of 16 per cent. in take-off distance and an increase of 40 per cent. in climbing speed. This combination of improved quality with a tenfold increase in quantity was an outstanding achievement, calling for many completely new plants. Most of the increase was again in America but we have every right to be proud of the British contribution too, especially at Abadan.
- (d) Lastly, certain large-scale transportation adjustments were necessary. Of these the most important were perhaps:—
  - (i) The consequence of the closing of the Mediterranean in 1940, when we could no longer afford the long haul from the Persian Gulf round the Cape of Good Hope to the United Kingdom, and had to draw supplies from Venezuela instead. As a result, Abadan had to be shut down below what it could produce—only to regain its importance not long afterwards when Japan denied us the oil of the Dutch East Indies and of Burma.
  - (ii) The action of American oil interests, before America entered the War, in carrying oil from Venezuela, Trinidad, etc., to New York, where our tankers could pick it up for the much shorter journey to the United Kingdom.
  - (iii) The arrangements made in the U.S.A., first by rail tank-car and barge, and later by the laying of enormous trans-continental pipelines, to relieve American tankers from the work of carrying petroleum products from the Gulf of Mexico to the Atlantic seaboard, and thus free them for the common effort of supplying the United Kingdom and the theatres of war as they developed.

These arrangements were made possible only by the utmost goodwill on the part of American oil interests before America entered the War, and thereafter by a complete fusion of the oil interests—of all kinds—of the United Kingdom and the U.S.A. Even then no transportation adjustments would have won the day had it not been for an intensive tanker building programme, mainly in the U.S.A., which left the Allies at the end of the War, in spite of very heavy losses, with appreciably more tanker tonnage—and faster tonnage—than at the beginning of the War. Another important factor was the very big storage space which had been created in the United Kingdom before the War. This reservoir, with excellent fast-working taps both in and out, and backed up later by over 1,000 miles of pipeline in the United Kingdom alone, gave a flexibility to our supply arrangements without which some of our transportation crises could not have been surmounted. As an example the North African landing was fuelled largely on stocks from the United Kingdom.

I have so far talked only of the movement of oil products to the Countries in which they were required, but you will appreciate that in any theatre of war the further movement and distribution of these products from base ports to the fighting troops is itself a difficult and complex matter. Supplies are usually pumped forward some distance by oil pipeline and then moved to mobile container filling equipment either by pipe or by road tank lorry. The varying and often unpredictable require-

ments of the military machine necessitate very large numbers of portable containers for distribution to troops to replenish quickly fuel tanks for ground and air equipment. Many of you will remember the large leakages in the Desert and elsewhere from "flimsy" containers, and how the Jerrican eventually provided the most satisfactory solution both here and for beach landing operations. Quality control of all petroleum products is, of course, most important, up to and including deliveries to troops, and the complexity of the task calls for the provision of specially trained and organized military distribution units.

# WORLD PRODUCTION, CONSUMPTION AND OIL MOVEMENT

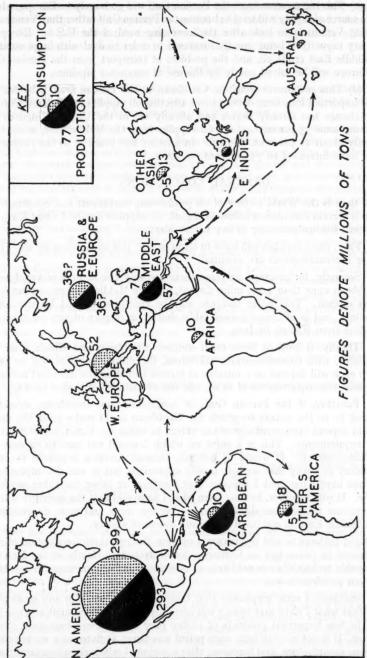
World production of petroleum and consumption of petroleum products rose from 50,000 tons per day in 1900, to 500,000 tons per day in 1930, and is to-day about 1,300,000 tons per day. The rate of increase shows no sign of decreasing and in another fifteen years or so world production will be of the order of two million tons per day. Bearing this important fact in mind, let us consider where the oil of the World is to-day produced, and where it is consumed. The figures, in percentages of world output, are:—

					Production percentage	Consumption percentage
U.S.A	***	***	•••	***	60	61
Caribbean (Venezue	la, etc.)		•••	***	17	6
Middle East (Persia	n Gulf/I	raq, e	tc.)		12	2
U.S.S.R	***				6	6
Rest of the World	***	•••	•••	• • •	5	25
				(4)	-	
					100	100

From these figures the main trend of international movement of oil at once become obvious. The dominating fact is that the U.S.A. not only produces but consumes nearly two-thirds of the World's production and has therefore no net surplus for export. Similarly Russia consumes what she produces, plus probably what she can take from her satellites. The Caribbean and the Persian Gulf area, on the other hand, have each an exportable surplus of about one-tenth of the World's production, and this two-tenths, or one-fifth surplus offsets the 20 per cent. deficit of the rest of the World. A large part of this deficit has to be made good in Europe, including the United Kingdom, and the inter-continental oil trade of the World therefore consists largely in the movement of oil from the Caribbean and from the Persian Gulf to Europe.

To complete this picture, and extend it into the future, we must note that :-

- (a) The U.S.A. reserves of oil are very large, perhaps 30 per cent. of the known World reserves; but they are not large enough to justify indefinitely a production of nearly two-thirds of the total World production. As a result the U.S.A., which until recently has always been a net exporter of oil, has now become a net importer. The degree of her dependence on imports is certain to increase continuously for many years, and the most convenient source for such increasing imports is obviously Venezuela.
- (b) The Middle East has enormous reserves of oil—perhaps 40 per cent. of the World's known reserves—and the output, and therefore the exportable surplus, of the Persian Gulf area is increasing and will continue to increase rapidly.



WORLD OIL PRODUCTION AND CONSUMPTION, 1948.

- (c) This big increase from the Persian Gulf will go largely to Europe, whose main source of supply will tend to become the Persian Gulf rather than Venezuela, leaving Venezuela to look after the increasing need of the U.S.A. European refinery capacity is being greatly increased in order to deal with large volumes of Middle East crude oil, and the problem of transport from the Persian Gulf to Europe will be solved partly by the use of enormous pipelines.
- (d) This switchover from the Caribbean to the Persian Gulf is by far the most important long term development affecting oil supplies for Western Europe. The change has already begun and already we in the United Kingdom are drawing some 35 per cent. of our oil supplies from the Middle East, as opposed to only about 20 per cent. in 1938. In another five years or so the proportion may have increased to 75 per cent. or more.

# GENERAL CONCLUSIONS

This then is the World picture of oil production, movement and consumption, and from it certain conclusions follow as regards oil supplies for the United Kingdom and Western Europe generally in any future war:

First, these supplies will have to come in war, just as in peace, by sea. Blue water communications are essential.

Secondly, for practical purposes there are only two sources of supply—the Caribbean more than 4,000 miles distant, and the Middle East more than 6,000 miles distant. This latter distance *may* be greatly shortened by trans-Arab pipelines, and is of course considerably shorter in respect of any oil taken by pipeline from Kirkuk in Iraq.

Thirdly, if both of these main sources—Caribbean and Middle East, are available, with communications therefrom, the proportion that will be taken from each will depend on a number of factors including the date and nature of the war, the requirements of allies, and the availability of tanker tonnage.

Fourthly, if the Persian Gulf, or communications therefrom, should be denied to us the extent to which the Caribbean could make good the deficit would depend fundamentally on the extent to which the U.S.A. could cut down her requirements. This is a point on which I would not care to express any detailed opinion. It would be difficult, because America is geared to an oil economy in a way that we here hardly appreciate, but in war the impossible is always happening, and I suppose that somehow or other the thing would be done. It will, however, be clear from what I have said that the difficulty is likely to increase rather than diminish as we become more and more dependent on the Middle East as our main peacetime source of supply.

I ought perhaps to add my personal opinion that synthetic production of oil—uneconomical in peace but, as Germany demonstrated so clearly in the late war, quite possible technically—is *not* likely to contribute in large measure to a solution of our own problem in war.

In conclusion I must emphasize that there is nothing static in any sense about oil, and that what I have said to-day will certainly require amendment at some later date. The less important products of to-day may be the more important ones of to-morrow. It is not so very long since petrol was burnt at flares as a waste product of kerosene manufacture, and kerosene, after a period of relatively minor importance, is now coming back into its own as a fuel for jet aeroplanes. Generally speaking, the

oil industry has shown and will continue to show great flexibility in providing in the required proportions the products needed from time to time and, although my talk to-day has been in relation to war, we all hope that this adaptability will in future be allowed to serve the needs not of war, but of peace.

#### DISCUSSION

COMMANDER (E) L. E. S. H. LE BAILLY, R.N.: The Lecturer gave us some indication that kerosene was coming into its own as a fuel for jet aircraft. Would it be producible on the same vast scale as aviation gasoline is at the moment?

The Lecturer: When I was describing crude oil as a mixture, I poured four different liquids into a glass, but mentioned that there are really more like thirty substances, all grading into one another as it were, which go to make crude oil. The first few are gas, the next few petrol, the next few kerosene, the next few gas oil, and the remainder fuel oil. Each main product is made up of a number of substances, and if we were to extend the kerosene bracket so as to bring in the lowest of the petrol fractions the product would still be kerosene. Therefore, you have a certain amount of flexibility there, although I must admit that any upward widening of the kerosene bracket increases the fire risk.

Secondly, you remember I described how you could "crack" fuel oil and thus increase kerosene output. My own opinion for what it is worth is that by a combination of these methods it will be possible to produce all the kerosene that will in practice be required.

GROUP CAPTAIN C. G. BARRETT, R.A.F.: Could the Lecturer give us some idea of the distribution of known reserves as between the areas which he has mentioned?

THE LECTURER: Reserves are a difficult problem. To start with, you cannot go down an oilfield in the same way as you can go down a coal mine, so you do not know for certain what is there. Geologists and other scientists can, however, give us a fairly good idea of what are called "proved" reserves. The proved reserves of the World are about 10,000 million tons, and since present world consumption is something like 1½ million tons per day, it follows that these proved reserves would last 8,000 days, or say twenty years, at present rate of consumption.

My guess as to how that 10,000 million tons of proved reserves are distributed is as follows:—

U.S.A. ... ... ... ... ... 30 per cent.

Middle East ... ... ... ... 40 ,,

Caribbean ... ... ... 15 ,,

U.S.S.R... ... ... ... No one knows, but I think that if one were generous one might say 10 per

Remainder (including Europe, Dutch East Indies, Canada, Africa, Austra-

lia) ... ... 5 per cent.

Those are, however, only the proved reserves about which geologists feel fairly certain. The probable reserves are much greater, probably five or six times as great, or let us say enough for 100 years at the present rate of consumption. Even then we are considering only reserves of crude oil which comes out of the ground as such. In addition to that, oil can be obtained from oil shale, that is, a special kind of hard clay which contains organic matter, and from which oil can be obtained by heating. There are enormous deposits of such oil shale in different parts of the World, but the trouble is that so much energy has to be put into the mining of the shale, and its subsequent heating, before the oil can be obtained. The disposal of the large volumes of spent shale is also a problem. However, these deposits will be available if and when reserves of ordinary crude oil are used up. Oil can also be obtained from coal, but much the same difficulties and increased expenditures arise as for oil shale.

WING COMMANDER H. M. C. HARWOOD: Among those other methods would the Lecturer comment on the value of the underground gasification of coal?

THE LECTURER: For what it is worth I think that has possibilities in the future. I have often wondered whether in fifty years or so atomic energy may not be used as a source of heat for underground treatment of coal in such a way as to yield oil products.

COMMANDER (E) LE BAILLY, R.N.: Although there is a shortage of gas oils, one reads that 75 per cent. of the shipping being built in this Country is Diesel engined. Is not that rather a hazardous policy?

THE LECTURER: The oil industry has been most flexible throughout history, adapting itself to these different problems, and that is the answer which I gave in respect to the question concerning kerosene. I think that somehow or other it will be done, and it will be done, in my opinion, for gas oils too. I think that it would be a retrograde way of dealing with the matter to design engines in accordance with what one thought might be available at a future date. I think that such shortages as may occur will be of a temporary nature, and that in general the industry will adapt itself in such a way as to produce the products which are required in the correct proportions.

COLONEL H. BROCKLEBANK: What about Burma itself?

THE LECTURER: Burma is included in the 5 per cent. which I have given for the production of the "rest of the World," but it has never formed more than a very small portion of that 5 per cent. It is therefore of negligible importance in the world picture which I have drawn. However, since you have asked, the present trouble in Burma is political, and it looks as if the restoration of law and order will be a difficult matter.

LIEUTENANT-COMMANDER C. H. C. ADAMS, R.N.: Is the whole of the 10 per cent. figure which the Lecturer has given for proved reserves in the U.S.S.R. reckoned on the basis of the Baku and Caucasus area, or is there another oil area?

THE LECTURER: I rather think that I have erred on the high side in attributing to Russia as much as 10 per cent. of the World's proved reserves. Russia's proved reserves are mainly in the Caucasus. If, however, we think of the World's probable reserves (in terms of a hundred years supply) I think that Russia's share would probably go up considerably, perhaps to 15 per cent. or more, but we would then be taking into account probable deposits still to be found elsewhere in the vast extent of the U.S.S.R.

CAPTAIN THORNELOE, R.A.: Could the Lecturer say whether any further underground reservoir building is envisaged? I am thinking purely in terms of the next war, if one should break out. We should lose the Middle East oil fields almost in the same breath. It would appear essential, therefore, to get a bigger potential in the likely places as quickly as possible.

THE LECTURER: I cannot say what underground storage is now in existence or contemplated. All I can say is that the quantities required in war are so great that one cannot hope to fight a war merely or mainly on stored oil reserves.

FLIGHT LIEUTENANT J. G. BISHOP, R.A.F.: Does the Lecturer agree that it seems rather amazing how Germany managed to carry on the War as well as she did from the point of view of oil supplies?

THE LECTURER: •I agree. That is one of the things which has always amazed me more than anything else, because the amount of oil available to Germany during the War would still be included in the 5 per cent. which I have given for the "rest of the World." Therefore, Germany was fundamentally very poorly placed from the point of view of oil.

I cannot help wondering in the first place whether Germany was not from the beginning more careful of her oil supplies than were the Americans and ourselves. At all events it is significant that it was Germany that produced the Jerrican in the Desert in place of the "flimsy" containers which we were then using. The Germans probably realized that they were up against it with regard to oil right from the start, and they must, I imagine, have impressed upon all their people—Army, Navy and Air Force as well as civilians, the

absolute necessity for keeping consumption down to a minimum. Then they made a very complete job of their synthetic production of oil from coal. Even allowing for this and for the Rumanian production and for their large pre-war stocks, it remains, for me at least, something of a mystery how they managed to carry on.

Captain S. Hamilton, R.M.: I understood the Lecturer to say that if we went to war, America might be able to adjust her economy so far as oil is concerned. Taking that into consideration with the proved reserves in the Middle East, and the increased requirement of oil in ten years' time, does not there come a stage when the Middle East becomes vital as opposed to saying if there were a war to-morrow we could go on without them?

THE LECTURER: I agree that is probably the case, but when that stage will come it is very hard to say. One can hardly over-emphasize the importance of the Middle East at this moment. Although I said that the United States might be able to cut down consumption in the event of a show-down and let us have what we required, it would be a terrible way of doing things. It would mean that everyone was cut to the bone, and it would mean that we were absolutely dependent on just how much America would allow us at every stage. Therefore, from many points of view it is true, I think, to say that the Middle East is vital at this moment. I suppose, on the other hand, that it is true to say that in war it is the impossible which always happens, and that if the Middle East should be denied us then in some way or other we should make do.

Captain H. J. Murphy, R.N.: If the Middle East is denied to us and if, in the meantime, having completed the pipelines across to the Mediterranean coast, we do not build as many tankers, it looks to me as though we should find ourselves in war short of a large number of tankers.

THE LECTURER: On the other hand, in the late war we were in very grave difficulties when our tankers began to be sunk. It is, however, extraordinary how the impossible is achieved during war, for the Americans got down to it and built tankers at such a speed that it was possible to make up the deficit. I of course fully agree that having a pipeline and not the equivalent number of tankers is a weakness from the blue-water point of view in a war.

MAJOR E. ROWLAND JONES, R.A.: In view of the fact that the North American continent seems to produce most of the world supply of oil, is there any research going on into the possibility of untapped reserves in the North Canadian region?

THE LECTURER: Yes; there is intense activity in Canada at this moment, and the Canadian position is a lot brighter than it was twelve months ago. However, even though in Alberta they have found bigger quantities of oil than most people expected, I am sorry to say that so far as anyone can guess, Canada is included in the 5 per cent. which I quoted for the reserves of the "rest of the World." Search for new deposits is going on not only in Canada but all over the World, but it just so happens that the oil reserves of the World are very largely concentrated in the United States, the Caribbean, and the Persian Gulf area.

COLONEL F. H. SMITH: Has the Lecturer any particulars as to the present outlook from the point of view of oil in Germany?

THE LECTURER: Nothing more than any of us can read in the newspapers. You have no doubt noted the resistance to the dismantling of synthetic oil plants.

COMMANDER (E) LE BAILLY R.N.: Can the Lecturer say anything about the story which was put out some months ago concerning the great shale reserves in America?

THE LECTURER: There is no shortage of shale reserves, but there is that snag about shale, namely, oil is energy and to get that energy out of the shale you need to put so much energy into it. From the point of view of cost and of use of industrial resources shale is nothing like so valuable as the crude oil which comes out of the ground as such. People are, however, making sure that shale deposits are available if and when crude oil fades out or shows signs of so doing.

COMMANDER (E) LE BAILLY R.N.: Does the Lecturer know anything about the re-refining of used lubricating oils in time of war? I am told this is done in Russia to a large extent and was also done in Germany.

THE LECTURER: Such re-refining is possible, but with some loss in the quality—what is called the "body"—of the lubricant. I suppose the extent to which it would be done would depend on the degree of the emergency, i.e., the scarcity of lubricants.

#### THE CHAIRMAN

I think that the Lecturer has made it perfectly clear that the World to-day is vitally dependent upon petroleum products and, secondly, that Europe in general and this Country in particular is, or very shortly will be, vitally dependent upon Middle East supplies of oil which have the greatest potential reserves in the World. The Lecturer has told us that the geologists estimate twenty years, and he has ventured a guess at a hundred years, but I do think that the technique of drilling for oil is advancing very rapidly.

I remember some thirty odd years ago when, if a well went down about 2 000 feet, it was considered a very deep well. There are at the present time wells which are going down to 20,000 feet, and we hope that they will increase the World's known reserve of oil enormously.

A good deal has been said about underground storage, and I can say that it is a matter which has, during the War and since, been given a great deal of consideration. It bristles with difficulties and, as the Lecturer has pointed out, you can only store a drop in the bucket when thinking in terms of 1½ million tons a day. There has also been a great deal of misconception about the possibility of great economies being effected in the United States in order to leave some oil for export to Europe. That was gone into very carefully during the War when we were very short of oil in 1941 and 1942, but what has not been realized in this Country is that the United States in the Winter have a very severe climate and that the heating systems in nearly all their skyscrapers in New York are almost entirely dependent upon fuel oil. It is very difficult for the United States to cut down their consumption of oil. They are becoming more and more dependent upon oil. People talk about cutting down the consumption of oil for cars, but it is much more than cars. The cars do not take a tremendous amount.

I am sure you will all agree with me that we should accord a very hearty vote of thanks to Major-General Abraham for his most interesting and informative lecture. (Applause.)

The vote of thanks to the Chairman was proposed by the Secretary—Captain E. Altham, R.N., and carried by acclamation.

# AIRCRAFT DESIGN, DEVELOPMENT AND PRODUCTION

By SIR FREDERICK HANDLEY PAGE, Kt., C.B.E., Hon.F.R.Ae.S., F.C.G.I.

On Wednesday, 9th November, 1949

AIR MARSHAL SIR W. ALEC CORYTON, K.B.E., C.B., M.V.O., D.F.C., in the Chair

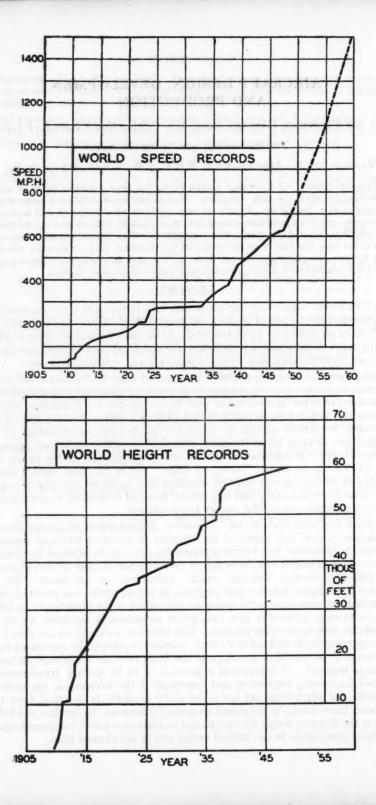
The Chairman: Sir Frederick, as you know, has been a central figure in aviation in this Country since the very inception. He has carried in aviation a name that has been, and is now, flourishing. I think we may say that it is due to him and his foresight that several very notable advances have been made both in military and in civil aviation. In World War No. 1, I can think of two aeroplanes which bore his name. Then in the interval between the two Wars, he produced the Heracles class of aircraft, which was world famous as a passenger carrier. I am certain that no one is more fitted to give a lecture this afternoon on design, development and production of aircraft.

### LECTURE

Superior Anglo-American air power, both in men and material, was one of the deciding factors in winning the Second World War. In future wars, the role of air power will be no less vital. To the designer and producer of aircraft fall the tasks of supplying the necessary air equipment, and of ensuring that the armed air Services maintain a technical lead over any would-be aggressor.

To secure and keep this technical lead, quality must be industry's first concern and, since maintenance of superior quality inevitably entails a high rate of obsolescence, replacement of types by modified or entirely new models is a continuing feature of the industry, with inevitable loss in output with each change. Whilst the organization must be flexible enough to admit of the frequent incorporation of these modifications, it must be, at the same time, rigid enough in its layout, jigging and tooling, to permit of expansion in time of emergency, not only in the parent design firm but also in associated "daughter firms." It is for these reasons that the building of Service aircraft presents manufacturing problems different in emphasis from those for civil aircraft, and why normal financial considerations must generally give way to enable the highest quality to be attained.

What has been said, so far, emphasizes the necessity for correct timing of production of new and improved air weapons to maintain technical superiority. It is well to remember that technical superiority can only be attained by continuous improvement in design and development over a period of time by every branch of the industry—whether airframe, engine, instrument, or armament. The time interval that elapses before a new type can be put in service has greatly increased in the last few years, due to the increased complexity of the functions to be fulfilled, and six to eight years may now pass before requirements visualized by Air Staff materialize into engineering product. This time lag occurs in an art that is very far from being stable or fixed in its ideas, whether as regards the specialized fighting equipment to be carried or the shape of the flying machine which shall perform the function required. If operational experience is to be quickly transformed into realized engineering expression, and conversely if the advances in the underlying scientific and engineering art are to be made available in practical form to the operator, there should be the closest co-operation between the Services and industry so that the designer, seeing the operational problem as a whole, can provide the best all round compromise in the finished design and in the shortest time.



The importance of the time scale can be judged by reference to the increasing performances that aircraft have been able to attain, as shown by contemporary World's speed and height records diagrams. They may be taken as a guide to the continuous challenge to performance that has to be met. Let us consider speed alone. If eight years are necessary to get a squadron of new type into service, then, hazarding a forward estimate for its speed to be commensurate with the trends shown in the diagram its design high speed performance for 1958 would, require to be 1,380 m.p.h., whereas, if the time scale could be reduced to four years, the top speed would only require to be 1,080 m.p.h., or some 300 m.p.h. less and, of course, a very considerably less technical effort required to achieve it.

In passing, it may be remarked that smaller types, such as fighters, with a shorter time cycle for evolution, should always be more technically advanced than heavier types, such as bombers.

In this paper, we shall examine some of the problems which confront the aircraft industry with respect to the design, development, and production of aircraft for national defence, see the way in which increasing Service requirements have led to increased complexity and longer periods of gestation and, finally, consider some of the ways in which the time cycle can be reduced.

#### EFFECTS OF THE GROWING COMPLEXITY OF AIR WARFARE

#### DESIGN EFFORT

Only 46 years have elapsed since the World's first power-driven flight. Thirty-five years ago, when the 1914–18 War began, the aeroplane designer was more concerned with getting the aeroplane to fly as a flying machine than with its use as a military weapon. Even at that time, however, the need was realized for large aircraft if bomb loads of adequate weight to have material effect on the enemy were to be carried.

The first successful large bomber was built in 1915—the H.P. o/100, of 100 ft. span and 1,456 sq. ft. wing area. It carried a load of six 112 lb. bombs. The load was eventually increased to 1,800 lb. when the original half ton of armour plate was removed from round the pilot's cockpit, and the engine nacelles. The only defensive armament was a rifle, carried by the second pilot or engineer.

From the simple air strategy of that War there evolved the mass air warfare of the 1939-45 War, when the task demanded successful execution in all weathers and against all obstacles. In consequence the military aeroplane of the present time has become one of the most complicated pieces of engineering work, with a correspondingly extended time interval for its realization. This increased complexity is reflected in the increased technical effort (measured in draughtsman-weeks required), and in the much longer period from official formulation of requirements to the day of the prototype's first flight.

Table I shows the small technical effort for two aircraft of the 1914–18 era in comparison with that required for the Halifax in 1938–39. Only six draughtsmen, working for fifty weeks, were required to produce our first large aeroplane (300 draughtsman weeks)—an effort approximately the same as that required for merely investigating the aerodynamics and performance characteristics of the prototype Halifax in 1938–39.

TABLE I

DESIGN EFFORT FROM INSTRUCTIONS TO PROCEED TO FIRST FLIGHT HANDLEY PAGE BOMBERS

Туре	All up Weight (lb.	Design Begun	Prototype Flew	Total Weeks	Average Number in D.O.	D/Wks.	Number of drgs.
0/100	14,000	Jan., 1915	Dec., 1915	50	6	300	295
V/1500	30,000	Oct., 1917	Apr., 1918	30	20	600	2,025
Hampden	21,000	May, 1934	June, 1936	III	21	2,364	8,000
Harrow	23,500	Sept., 1935	Oct., 1936	59	42	2,500	7,000
Halifax		Aug., 1937	Oct., 1939	118	71	8,320	13,000

During, and since the nineteen-thirties the bomber, in order to carry the heavier load required in bombs and equipment, has grown steadily in all-up weight. The technical effort required to design such aircraft has progressively increased, more or less in proportion to the all-up weight for the larger types of bomber aircraft to somewhere about one draughtsman-week for every 7 lb. of the all-up weight. Table II gives corresponding average figures of draughtsman-weeks, over the period 1935-45, for a range of aircraft from the small to the largest types.

TABLE II

Design Effort to First Flight, According to Type (Average over period 1935–45)

Here was a second of the second		Dra	ughtsman We	eks/	lb.A.U.W./	
Type				lb.A.U.W.	· ·	Draughtsman Week
Bomber	***		00.	0.148		6.75
Fighter	***			0.287		3.5
Primary Tra	ainer			0.287		3.5
Naval Aircr	aft			0.395		2.5
Advanced T	rainer			0.687		1.45

It is difficult to say whether, with increasing complexity of requirements and with alternative studies to be made, this design output will be maintained. It is not, however, output per week per draughtsman or designer that is the sole criterion to be studied. Whilst the design can be broken up into sections for simultaneous treatment, certain problems to be solved and certain design work to be schemed cannot be dealt with by more than a small number of men, and these settle the pace of the whole work. Thus, a time scale inevitably comes into the picture. This, again, affects not only the design but the value of the design itself, for unless we get the design produced at the right time, the aircraft may be obsolete before it is finished. This is where we, in Great Britain, have to contrive means of getting results quickly in spite of our relatively small design capacity. It is the high quality of the few rather than the commonplace output of the many that will set the pace at which progress is made.

So we see that normal developments in air warfare have resulted in-

- (a) a great increase in aircraft all-up weight—up to a fourfold increase;
- (b) a greater increased complexity in design, equipment and in consequence—
- (c) a great increase in the design effort required, which is somewhat proportionately to the all-up weight and therefore—
  - (d) a lengthening of the time scale for design, development and production.

Present inflationary tendencies are likely still further to raise the present high design costs. But, if we are to continue in business, action is necessary to halt these spiralling tendencies.

We will now examine how these complexities have affected the production effort. Later, we will discuss some of the further complexities that lie ahead, and some of the ways in which they are being tackled.

# PRODUCTION EFFORT

The ever increasing technical effort in aircraft design shown by the increase in the number of drawings required, has its counterpart in the increased productive effort called for in the shops. This increased productive effort results, not only from an increase in complexity and size of aircraft and from the wider range of equipment to be carried, but also from the almost revolutionary changes which have taken place in aircraft design. The fabric covered aircraft of the 1914–18 War, with wire-braced, composite wood and metal structures, were easily made with simple metal and wood-working machine-shop facilities. As the whole structure was open until the last operation of fabric covering, it was an easy matter to instal equipment, piping, and electric cables.

With increasing air speeds came the internally braced monoplane with its lower drag. Stressed-skin metal structures became standard practice. A new technique was called into being, with elaborate tooling, forging, press work, heat treatment, etc. In final erection, equipment installation could no longer be treated as something to be wholly left until the structure had been assembled. Equally well, it was more difficult to modify equipment layout.

With increasing size and weight of aircraft came the need for power operated services (pneumatic, hydraulic and electric), for a host of applications not even visualized previously.

It is noteworthy that the simpler Harrow prototype, with the less technical effort required in the design office, was flying in under half the time of that required for the Halifax. Even after the jigs were well on the way, it took longer to get the Halifax into production. Had the pre-war production man-hours remained during the 1939-45 War, we should never have obtained the war output required. It was only by the economies effected in quantity production that the effort was reduced. As an illustration of these reductions figures for the manufacture of a bomber centre-section, during different phases of the production, are given in Table III, below.

TABLE III

MAN-HOURS TAKEN FOR COMPLETE ASSEMBLY OF A

BOMBER CENTRE SECTION

Period		and,	Man-Hours	Percentages.
At start	•••		1,014	100
After 12 months		***	592	58.3
After 15 months		***	346	34.1
After 17 months	***	***	230	22.6

With the general trend at the present time towards greater complexity in design, and with the small scale of peace-time manufacture, the part played by production assumes more and more importance, and it is necessary to review possible future developments, and consider their effect on productive effort.

# TRENDS IN AIRCRAFT DESIGN AND THE RESULTING TECHNICAL PROBLEMS

Throughout the whole course of aircraft development, the Service demand has been for increased speed, load and range. To satisfy the demand for greater load and range, the aircraft designer has had to build larger aircraft. With every increase in size comes the increasing difficulty of combating an increase in the airframe structure weight, as a percentage of the whole. This increasing trend to save weight, of itself, makes the aircraft structure more complex. Whilst the development and use of light alloys of higher strength have helped in keeping weight down, the increase in wing loadings associated with the higher speeds required has been a bigger factor.

Early biplanes, such as the O/100, had so much parasitic drag that, with high wing loadings, the gliding angle would have been excessive and the machine would have landed like a brick. The gradual cleaning up of aircraft, in the change from biplanes to monoplanes, in the cleaner fairing of fuselage and power plants, and in the use of the retractable undercarriage, has so reduced drag, that it has been possible greatly to increase wing loadings without too adversely affecting the gliding angle, even with the higher values of induced drag that result from the higher lift coefficients obtained by the use of wing flaps. But, although structure weight percentages have been maintained more or less constant by the use of high wing loadings and the consequent reduction in wing span, the use of these high wing loadings has only been possible at the expense of higher landing speeds which, in turn, have necessitated the building of prepared long runways. The immense capital outlay involved in these runways is such as considerably to restrict their future development, when it is pointed out that a 2,000-yard runway may cost £250,000, apart from the cost of perimeter tracks. As an indication of aerodrome costs, it may be noted that already over £400 millions have been invested in international civil airports, for runways and buildings.

If wing loadings are to be still further increased—and much higher values are spoken of—Service aircraft operation will become more and more dependent on the availability of runways and, therefore, aircraft may lose that flexibility in operation which should be one of their main characteristics.

Such all-up weight increases, and their effect on design, can be considered as normal and to be expected in the development of an art, but the introduction of the jet power unit, with its high power weight ratio, has made possible so vast an increase in speed that a new series of aerodynamic and structural problems have arisen.

In the first place, if we are to avoid undue increase in drag and use our power plant efficiently, flights must take place at greater altitude with increased operational problems for crew amenities and military effectiveness.

Secondly, the detail design must be much more carefully studied so as to delay, as far as possible, the onset of local supersonic velocities on aerofoil surfaces. This also entails much more accurate manufacture of the external profiles of wings and fuselage.

Thirdly, because the lift, drag and stability characteristics of aerofoils change completely, as the speed of sound is approached, each new type requires to be tested thoroughly in high speed wind tunnels—tunnels which require thousands of horse-

<sup>&</sup>lt;sup>1</sup> Wing loadings have increased with the passing years from 5 lb./sq. ft., on the original O/100, to more than 50 lb./sq. ft., on the Halifax; yet the wing spans, which would otherwise have been increased, remain sensibly constant at 100 ft., for the braced biplane of 14,000 lb. (O/100), and for the war-time Halifax monoplane of 65,000 lb.

power for their operation. For example, our own Company's old original small wind tunnel of 1918, in which the whole of the development of the slotted wing device took place, had only 30 h.p., and a wind speed of 40 ft. per second. To-day, one American manufacturer operates a supersonic wind tunnel requiring no less than 20,000 h.p.

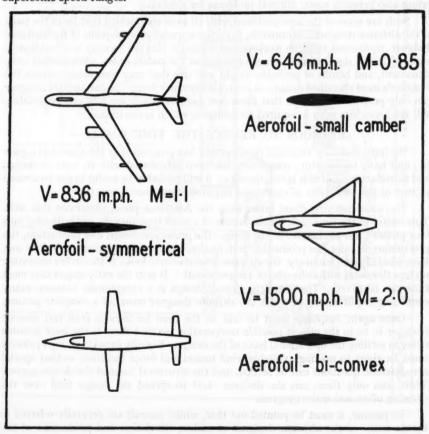
Fourthly, operation at these high speeds introduces problems of aero-elasticity, such as flutter prevention, etc., which involve much structural research, calculation

and test.

Some idea of the new field opened up by these high speed problems can be seen from the evident research work that has to be carried out to determine the characteristics of the new aircraft plan forms now being developed. Among the plan forms are the swept-back wing, tailless, and the delta, although the last is more suitable for the super, rather than the sub-sonic field.

If we wish to pass through the sonic barrier and fly above the speed of sound, it is essential to use the thinnest possible wings compatible with strength, with very low values for the thickness/chord ratio of the profile. The diagram below gives some forecast of the shape of things to come, in high sub-sonic, transonic and

supersonic speed ranges.



Somewhat similar in shape to these supersonic aircraft is the Douglas "Skyrocket," which is described in Aviation Week of 3rd October last. This is designed for some future possible speed of 1,820 m.p.h. at 75,000 ft., and has already flown at 710 m.p.h. at 26,000 ft. It is interesting to reflect on the increase in complexities that come with these new types of aircraft and, therefore, to find that although the aircraft was completed in November, 1947, and first flew in February, 1948, it has taken eighteen months of development work to reach the present speed. It must also be remembered that this is a research aircraft and, in consequence, it may take an appreciable time before Service aircraft operate at these speeds.

High speed flying leads, also, to aerodynamic heating, due to the great frictional losses along the surface of the wings and fuselage, and makes fuselage air conditioning necessary if crews are carried.

Very high speeds will only be possible if turbo-jets fitted with after-burners, ram jets, or rocket units are used. All these give their best efficiency at much higher altitudes than have been considered so far. If crews are carried the air conditioning problems become somewhat of a nightmare, particularly in view of the unreliability of many of our transparent plastic materials. Emergency escape from pressure cabins also presents many difficult problems for solution.

Such are some of the new problems with all their complexity that lie in the path of the airframe designer. Meanwhile, from the worm's eye view-point of the airframe designer, equipment research workers and designers also are secretly and insidiously engaged in the development of new equipment for radar, radio, navigational aids, armament, and bombs of probable weight and size that may completely change the designer's most cherished dreams of clean aerodynamic form. So the aircraft designer can only pray as he proceeds that these new gadgets, which are now unmentionable, will not leave him with a required performance which is unattainable.

# METHODS TO REDUCE THE TIME SCALE

We have seen how technical development has progressed as the years have gone by, and how, inescapably, complexity has been introduced with it, both in design and manufacture. At this point, therefore, it will probably be useful to get an overall picture of the time cycle of operations required to produce a new type.

The accompanying chart taken from the American press, illustrates this well. This relates to the time cycle for production of a small type aircraft, and is divided into four phases: the evaluation of the design, the prototype design and production, the preliminary or pilot line production and, finally, quantity production for Service use. How wistfully and longingly, the airframe manufacturer looks at the orders mounting up to a thousand with deliveries of 120 per month! It is in the early stages that most time can be saved. The complete aircraft design is a compromise between many conflicting requirements, of which the airframe designer must get a complete picture.

Once again, emphasis must be laid on the need for Service staff and aircraft designer to be in the closest possible co-operation, so that there is the least possible delay in settling the operational basis of the design. Equally important, high priority must be given to making available wind tunnel and other facilities, so that special aerodynamic questions can be settled, and the structural basis of the design agreed. Then, and only then, can the designer start to spread the design load over the drawing office and make progress.

In passing, it must be pointed out that, whilst aircraft are generally referred to by the name of the airframe designer or maker, the design and production of the

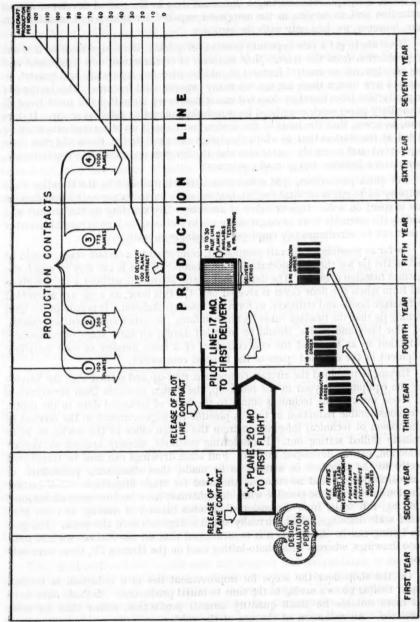


CHART SHOWING PRODUCTION TIME FOR A SMALL, AIRCRAFT

airframe is only a part—and a small part at that—of the aircraft production. More and more, is equipment becoming a dominant item in the cost of development and production and, in service, in the manpower required for upkeep and maintenance. Here, however, we deal only with the airframe.

If we are to get a new type into production quickly, the design must be laid out for production from the start. New methods of construction, new equipment and new aerodynamic or control features should be tried out separately and proved, so that in a new design there are not too many experimental features. This laying-out for production from the start does not mean that every aircraft detail must have all its ancillary paper work completed for scheduling, planning, rate-fixing, etc. It does mean, however, that the basis of the design and its split up of components must be settled at the start as that to which the design office will design, the works plan their shop layout and assembly operations, and the Services organize spare requirements, maintenance facilities and ground equipment.

For quick production, split construction (first introduced by the Handley Page Company in 1935), is of vital importance, as some 75 to 80 per cent. of production time is spent on some stage or other of assembly. By splitting up the aircraft and dividing the assembly work amongst many works sections, the largest possible number of men can be simultaneously employed on a single aircraft.

As far as possible an aircraft component, completed to a certain stage, should be used as the jig for the next operation. An example of this is the way in which the Hastings fuselage is made. The detail floor parts, assembled without a jig, are given final form when the floor cover is riveted on. On this floor, as a jig, are assembled the fuselage hoops and stringers, to form the fuselage skeleton. It is only in the final skinning jig that the fuselage takes its finished form. As much equipment as possible, e.g., pipe lines and cables, should be installed during an early stage of component production so as to avoid the concentration of a large number of men installing equipment in the confined space of the finished component.

Having determined the aircraft component split-up and settled with the Service user the equipment layout in the mock-up, the design proceeds from aerodynamic and stress work in the technical offices to the issue of technical data to the shops. Here, considerable reduction in time is possible by improvements in the method of transmission of technical information from the design office to the works, so as to eliminate skilled setting out. Photo-lofting methods, already applied to aircraft production, can be developed further. Full scale drawings can now be transferred directly to the template or articles to be made, thus eliminating possibilities of transposition errors and so reducing the need for stage inspection. Still further reduction in time will be possible when draughtsmen have become more accustomed to lofting, full scale, from dimensioned sketches instead of mainly, as now, from smaller scale drawings, which virtually entail a duplication of the work. The gain from lofting can be shown when it is mentioned that on the Halifax we had some 13,000 drawings, whereas with photo-lofting used on the Hermes IV, there were only 6,500.

On the shop floor the scope for improvement lies in a reduction in tooling. Simpler tooling gives a saving in the time to initial production. Methods have to be used more suitable for small quantity aircraft production, rather than for mass production. An extension of the use of the rubber press for which tools can be marked out mechanically by photo-lofting, and the stretcher press, will meet this requirement, since single simple forming tools only are necessary.

Increase in wing loading has resulted in heavy wing skin loads and, therefore, in plated rather than skinned wings. The weight of such skins becomes an important item in the airframe structure. Consequently, in the very highly loaded wings, the skins are taper milled, so that their thickness is kept throughout the span to the minimum required. The light alloy sheet manufacturer, however, has a part to play in rolling sheets of much larger sizes than are at present available in this Country.

These methods are taken by way of example of how, in the shops, the problem is being studied with a view to reducing the time scale of production. The greatest saving in time can probably be made in test flying. The total number of actual flying hours for an aircraft to complete its tests may be relatively small but with delays due to bad weather, and with modifications to be carried out as the result of tests, the time which elapses may be considerable. It always seems to happen that when the weather is good the aircraft is unserviceable because a modification is being carried out, and vice versa. Equally, it always seems that a new type is ready to start on its trials in the Winter, and that most flying is urgently required to be done on Christmas Day, or some other holiday period. What a time saving could be effected if we were able to transfer here the weather of California!

# SOME CONCLUSIONS TO BE DRAWN

The design and development of aircraft does not proceed at a normal pace throughout the years. At certain periods, under the stress of international crises, an impelling urge forward causes completely new theoretical possibilities to be translated into accomplished fact. So, in the past, we have seen the higher speeds reached in the change from biplane to monoplane, the great increase in size of aircraft in the two World Wars because of the increased bomb loads to be carried and, finally, we have the great leap forward that has been made possible by the jet unit with its higher power and low weight.

With this high power/weight ratio the operational field is so extended, both in speed and altitude, that not merely have we to make great advances in aircraft design, but equally, to make almost revolutionary changes in equipment which the aeroplane has to carry. Thus we are faced with a situation that demands developments quite at variance with Lord Northcliffe's dictum, "Never make an experiment on an experiment" for to-day a new type of aircraft with its new types of equipment, seems to be nothing but a collection of experiments.

It is difficult to ensure that all those who specialize in the different branches of science and engineering which are drawn upon for the make-up of an aircraft, possess an equal awareness of the aerodynamic and structural implications of their own particular contribution, and of the consequences that result from oversized or overweighted equipment; and it is equally difficult to get them to forgo what are, in fact, non-essential refinements to make more certain the operational success of the whole.

The collaboration of the Service user, the designer and the producer, in mock-up conferences and in the installation of equipment relative to the component split-up, is valuable for ensuring a proper balance in new design. This procedure could, without doubt, be extended with advantage by the participation of the equipment designer, so that he views his equipment from the background of the aircraft designer.

If the aircraft designer is confronted with the problem of installing equipment unalterable in weight or dimension, his scope for aerodynamic or structural development is clearly limited and, in fact, the very attainment of the essential purpose of the aircraft may be jeopardized.

If we are to keep within reasonable bounds the time-lag between initial conception and final flight realization, the method of producing experimental aircraft must be greatly simplified in comparison with the methods normally adopted for quantity production. With all the complexities in the aircraft and its equipment, the supervisory and design functions of both supplier and purchaser become widely spread in a host of Departments and industrial organizations and, being widely spread, co-relation becomes more and more complicated, the time between decision and action extends and unity in realization is difficult. It is a matter for consideration whether, if urgent action is required, aircraft experimental development should not be concentrated primarily around the article to be completed rather than by a wide devolution and decentralization by function of its constituent elements. Thus, our Company in October, 1917, was instructed to design a bomber of 30,000 lb. weight (the V/1500) which was twice the size of the existing O/400. This aircraft was built and flown in the record time of seven months. It is true that construction then was much simpler, but the official and industrial control of the project was concentrated in what may be termed a small committee of official, technical, contract and industrial representatives, whose sole job was to carry to completion the work of designing and building the aircraft; and they had plenary powers to carry through the work.

Such a system finds a comparable organization in an Experimental Department in a works where experimental design office, shops, buying department and contract office are all located in a small organization capable of taking immediate action on any problem to be solved.

Over the whole picture comes the shadow of weight. For everything that is in the aeroplane must be carried into the air against the force of gravity and, considered on the broadest lines, air force operations are in fact mountaineering operations conducted at heights up to and far exceeding those of the Himalayas. Everything, therefore, must be considered as though it were required to be the equipment for a mountaineering expedition.

Every saving in weight has a cumulative effect on the final aircraft design and its overall efficiency. For a design to a specified performance, any decrease in crew or equipment weight decreases the all-up weight, and this again allows both wing area and power unit capacity to be reduced with a consequent still further decrease in all-up weight. The resulting aircraft can be built smaller, lighter in weight, and probably also cleaner in form, and should be cheaper to build.

Above all, the human contribution is the most important. If it is necessary to save in equipment weight, it is still more necessary to save on the number of the crew that have to be employed. In view of the many varying types of equipment that have to be carried, it is essential that as much as possible should be automatic in action. Equally well, the crews should be highly trained with capacity for carrying out a great variety of duties. Such standards can only be attained by those who serve for a long period so as to get the necessary training. Correspondingly, if the aircraft and its complex equipment is to be kept in first-class condition, there must equally be first-class personnel on the ground. Whilst industry can make a contribution in the pre-training of apprentices prior to their National Service, the maintenance skill and knowledge necessary for the efficient operation of these highly finished products can only be acquired by long Service training.

Whatever future developments may hold in guided missiles, push-button warfare or other scientific dreams, the human element must always be the dominating and directing factor, and it is only by continuous training and development that the highest attainment can be achieved in design, production and operation.

#### DISCUSSION

SQUADRON LEADER D. P. BOULNOIS: We all know the months, and in fact years that it takes to produce airborne equipment, and also the development time needed to keep it up-to-date. Would it not be possible to produce an ideal compromise between the design of equipment for aircraft, and the design of the aircraft to which it is to be fitted?

THE LECTURER: I think I should reply in the words of Omar Khayyam:

"Ah Love! could thou and I with Fate conspire
To grasp this sorry Scheme of Things entire,
Would not we shatter it to bits—and then
Re-mould it nearer to the Heart's Desire."

In the presence of those who control such matters, I feel that I might advance the subject further in private discussion rather than in debate. Having made that caveat, I will say what I think might happen, if it were possible. If we got some big problem such as confronts us every now and again (I cannot elaborate on what they are), if we suppose that the problem was to make a fighter which would fly at 2,000 miles an hour, have a range of 2,000 miles and which would need to stay up 10 hours (which it would be difficult to attain!)—if we had a big problem involving a whole lot of things, I am not sure that some of the essential matters in it could not best be dealt with if, instead of drawing on the different departments, one had some specialist, high-quality people and let a team of half a dozen get out the new design.

Towards the end of the War, the Germans on their experimental work had a contract man from their Air Ministry, a technical man, and the corresponding people from the works all working together on a problem.

When you come to look into the details of navigational aids—radar and other things, of course you can very easily see what difficulties you can get into.

But the problem resolves itself into the fact that you must have a lot of very highly skilled people. To my way of thinking, if we are going to make progress, we shall do it only by seeing that the training is right and that we get highly skilled people who have an omnibus kind of view of certain things and bring them together.

At some time there is necessarily a big tendency to devolve things into a lot of watertight compartments. Watertight compartments have their use, but it is not in getting quick action, as you may know. Watertight compartments are generally brought into action when the organization in which they are fitted is in a fog and not quite certain where it is going and, if there is a disaster, watertight compartments prevent the disaster from extending beyond more than one watertight compartment. I do not know what the analogy would be when you come to deal with a Government Department; but you can think that out yourself.

Wing Commander H. M. C. Harwood: It does seem that in the past there has been a tendency for aircraft to be produced and only at that stage to begin thinking about what kind of fuel oil is to be used in it. Would the Lecturer tell us whether he thinks that there should be better liaison earlier between the aircraft designer and the oil industry?

THE LECTURER: In the 1914-18 War a group of people down at High Wycombe was engaged in the construction of biplanes and they built the first one. Until they had built it completely, they did not realize that the doors were not big enough to get it out of the shed. You do not, therefore, need to go as far as the very enterprising and virile

oil industry to find things like that happening. As far as I know, arrangements generally are made whereby one can get the right kind of oil. I thought that was one of our least troubles. We have only, so to speak, to strike the rock and the oil is poured out.

CAPTAIN E. ALTHAM, R.N.: I should like to ask three questions. First, can the Lecturer tell us, from the point of view of the designer, whether, in the case of carrier-borne aircraft, there are very special requirements, as regards performance, and so on, to be catered for, and whether these are complicated by the flying and housing limitations of the carrier?

The second question is, did anything come out of the German bag at the end of the War as regards ideas that we did not know about before and which have proved useful to our own designers?

The last question is, would the Lecturer care to remark on the future of pilotless aircraft?

The Lecturer: With regard to the question about carrier-borne aircraft and their complexities, there are necessarily more complexities in carrier-borne aircraft than in land-based aircraft. First of all, the question of protection against corrosion makes the use of certain metals more difficult. Another thing is the limitation on span, and of course the limitation in regard to either take-off or landing. Against that, there are certain things which are an advantage. The carrier is a very mechanical piece of apparatus which can be moved about. One can imagine all kinds of devices for shooting things off a carrier or even bringing them to land. One can imagine that they can land without undercarriages. I will not say land without wings, because they might do that, but not very satisfactorily. But there are things obviously that limit the carrier-borne aircraft, and generally speaking you get a wider scope if you are dealing with land-based aircraft.

The reply to the second question is Yes; some extraordinarily interesting things came from Germany. One of the most curious things that we learned was how unco-operative the Germans were in different branches of their activities: one lot hardly seemed to know what the other lot were doing. On the technical side, one of the most interesting things was the use of that combination of hydrogen-peroxide with permanganate of potash to get extremely high powers in a very short time, and the application of that to a wing in order to give an increased air stream over the wing and therefore a very much higher lift out of the wing. By such means in the laboratory they achieved lift coefficients that were about four times as great as we have had. Several other things, too numerous to mention, have come out of what the Germans were doing at that time. What amazed me most was that when some of our troops went into one of the German factories where parts were being made, there was quite a feeling of resentment on the part of the German scientist that his work was being interfered with by the intrusion of these people. The scientists seemed to live quite removed from everyday life.

The value of pilotless aircraft depends, of course, entirely on whether you can guide them or not. That is a question of radio more than anything else. Obviously, if we can eliminate that which brings the question of human morale into effect, we have a weapon that cannot be upset on morale grounds alone. Even if you lost 95 per cent. of them, 5 per cent. would still go through unaffected. If you could guide such a weapon and if you could make it so that your guiding means are not going to be upset by enemy action—marvellous. Whether you could do that for 1,000 or 2,000 miles, I really do not know. At the present time it seems to be quite difficult enough on a foggy day to get down to an aerodrome that you know to be quite close at hand. One has seen the accuracy, or inaccuracy, of the V.2 weapon. I presume that we should have to have a much more accurate means of reaching the desired end effectively.

#### THE CHAIRMAN

We have had a very interesting talk this afternoon by Sir Frederick Handley Page. There is one point to which he has referred in many ways that I should like really to put across, and that is the question of added weight. From the Services point of view

it has to be looked at not only from the point of view of weight, but from the point of view of what it means in added cost. Sir Frederick has shown quite clearly how in evolution the design of aircraft has become more and more complicated, and how more and more man-hours are necessary to design aircraft to fulfil the same purpose for which they were designed many years ago. I think that from the Services point of view those trends are reflected in increased costs. The costs to-day of the development and production of modern Service types are such that one could well ask whether the Services will ever be able to buy adequate aircraft with which to equip their units.

We have got to be extremely careful to keep our Service requirements down to what is really essential to enable aircraft to fulfil their primary function, and we cannot add to those requirements other demands for equipment merely because they might be useful. If this is done the all-up weight of the aircraft and its expense will be greatly increased. It was pointed out some time ago that for every pound of weight of added equipment, the aircraft goes up by four pound to seven pound according to the type. When aircraft may cost up to £4 a pound to produce, weight increases on this score alone are important enough, without even taking into consideration the effect on performance.

In conclusion, I should like to thank very much, on your behalf, Sir Frederick Handley Page for the most interesting lecture which he has given us this afternoon.

The vote of thanks to the Chairman was proposed by Commodore Harrison, R.N.R. and carried by acclamation.

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# AMERICAN NAVAL AIRSHIPS1

By LORD VENTRY

"They were dependable," and partly on the United States Naval Airship Report—
"They were dependable," and partly on the experience of a month's visit to that Country during August and September of this year, when, thanks to the courtesy of Douglas Leigh Sky Advertising and to Goodyear Aircraft Corporation, flights were made in ex-Navy K. and L. class airships totalling over 76 hours flying time. These airships are well and easily handled and their crews have the utmost confidence in them. The firm of Douglas Leigh is engaged in extremely spectacular Sky Advertising, while Goodyear Aircraft Corporation have constructed all the airships flying in the United States to-day.

Between 1942 and 1945, Goodyear built, test flew, and delivered 168 airships, this figure being made up of 134 K., 22 L., 4 M., and 8 G. class, all of which were taken over by the U.S. Navy. With the exception of the four large M's, all the rest were erected at the Goodyear Base at Wingfoot Lake, near Akron—three to four a week being delivered in the Summer of 1943. Each airship was given a four-hour test flight, and if destined for the East Coast was flown to Lakehurst. Those for Moffett Field, California, were packed up and sent by road. No mishaps of any kind occurred during these acceptance test flights, and there were no labour troubles of any kind among the ground staff in spite of the long hours of work.

All the naval airships in 1939, were based at Lakehurst, New Jersey. The only other airship station—at Moffett Field, California, being used by heavier-than-air craft.

The airships at Lakehurst consisted of some three 426,000 cubic feet K. operational class, two 123,000 cubic feet L. types, and one 180,000 cubic feet G. class for training purposes. There were also two ex-army T.C. airships which were similar to, but slightly smaller than the naval K's. Some details of these naval airships will be found at the end of this article. Captain Mills, U.S.N., was in charge at Lakehurst, and soon after war broke out he sent out the available airships on exercises with seagoing craft and submarines to see what really could be done with them. Much useful experience was thereby gained, and the authorities at Washington realized that the non-rigid airship had considerable value for coast patrol, escorting convoys and hunting submarines.

In October, 1939, it was reaffirmed by the Navy Department at Washington that non-rigid airships should be built and maintained in numbers and classes adequate for coastal patrol and other essential naval purposes. On 15th June, 1940, the construction of 48 non-rigid airships was authorized. On 9th January, 1941, the General Board recommended that the non-rigid airship programme approved by the Secretary of the Navy on 25th October, 1940, for the construction of five Atlantic and three Pacific Coast Airship Stations during the years 1942/1943 be carried out. On 12th December, 1941, the President directed that the full non-rigid airship programme should be executed finally. The airship strength was increased to 200 on 16th June, 1942.

But, by the time of the Pearl Harbour incident, very little had really been done. The airship fleet had been slightly increased and there were now 4 K.-type patrol

<sup>&</sup>lt;sup>1</sup> The term "airships" is used throughout this article to mean "non-rigid airships." The U.S. Navy has not constructed or used rigid airships for a number of years.

airships, 3 L.-type trainers, I G, and 2 army T.C. airships in commission. These were all at Lakehurst, and they had no less than 5,000 miles of sea frontier on two oceans to patrol. Nor was the submarine peril an imaginary one for, with the declaration of war, attacks and sinkings became common and were even made successfully within sight of the American coast. In 1942, 454 merchant ships were sunk in the American Atlantic area, and at that time there were only 4 to 13 airships. In 1943, 65 ships were sunk by submarines; then there were 17 to 53 airships. In 1944, only 8 ships were sunk, and in 1945, 3 ships; in 1944 the airships numbered from 56 to 68, but dropped back to 53 to 48 in 1945. The losses in 1942 were very serious indeed, for ships were being sunk faster than they could be replaced. There was a great call on the airships, for it was found that when one was in the vicinity no U-boat attacked successfully.

#### ORGANIZATION

Soon after Pearl Harbour it was decided to send airships over to the West Coast. In January, 1942, Airship Squadron Z.P.32 (two T.C.'s and two L.'s) went to Moffett Field, California. Later, when more airships were available, their disposition was as follows:—

Fleet Airship Wing I, consisting of four squadrons, had its headquarters at Lakehurst. Each squadron had eight airships, these being based at South Weymouth, Massachusetts; Lakehurst itself; Weeksville, North Carolina; and Glynco, Georgia.

Fleet Airship Wing 2 had its headquarters at Richmond, Florida, and consisted of three squadrons—Z.P.2I, with fifteen airships was based on Richmond, two others with four airships each were based on Houma, Louisania and Varnam Field, Jamaica.

Fleet Airship Wing 4 had its headquarters at Recife, Brazil, the two airship bases being at Sao Luiz and Maceio, also in Brazil. Each of these squadrons had eight airships.

Fleet Airship Wing 5, with eight airships, was at Trinidad.

Thus there were 79 airships to guard the Atlantic Coasts. In addition, there was the "Utility" Squadron consisting of six G. and two K. airships. The head-quarters were at Meacham Field, Key West, Florida. Two of the G. class were based on the Naval Air Station, South Weymouth; the other four G.s were moored out at Fisher Island, New York—the naval mine warfare test station, Solomons, Maryland, and at the Naval Proving ground, Dahlgren, Virginia; the two K. airships were at headquarters. These airships were used for experimental purposes of all kinds, mostly in conjunction with the other Services, providing photographic calibrations, torpedo recovery, working with combined operations, carrying out spotting exercises with tanks, and so on. This squadron also administered the airship anti-submarine training detachment in the Atlantic Fleet.

On the West Coast, Moffett Field, California, was the headquarters of *Fleet Airship Wing* 3. This consisted of three squadrons—two with twelve, and one with eight airships, making 32 airships in all. The airship stations were at Santa Ana, California; Moffett Field, California; and Timmamook, Oregon.

#### WAR SERVICES

Most of the work was done by the K. type. The normal duration of a patrol was some 15 to 25 hours, as it was found that this was about the maximum time that the crew was really efficient. For flights of this duration the airships could maintain

a speed of over 60 m.p.h. Their duties were to escort coast-wise convoys and to fly out to about 200 miles from the coast. By 1944, the enemy submarines seldom ventured into the areas patrolled by airships. During the whole period when the United States were in the War, 532 vessels were sunk in American coastal waters, but in no case was an airship present.

The K. airships had not sufficient range to cover the gap in the Atlantic or to fly very far out to sea, for there was not then much co-operation with the aircraft carriers, as is the case to-day. In 1943, a larger class of airship was constructed called the M. type. This was of 625,000 cubic feet and was designed to work in warmer climates where increased temperatures lower the lift of an airship. They carried a double crew, so their range of action was much superior to that of the K. class. They had a maximum speed of nearly 80 m.p.h., and could fly for over 17 hours at full speed. They could cruise for nearly 50 hours at a speed of over 50 m.p.h. However, by the end of the War only four had been built, and they were never really able to show their capabilities.

In the Spring of 1944, it was decided to send an airship squadron to the Mediterranean and, at the end of May, Squadron 14 was flown over, via the Azores. It took 58 hours to fly from Argentia to Port Lyautey in French Morocco—a distance of 3,145 miles. Relief airships were sent out in the Spring of the following year; these flew the 3,532 miles from Weeksville to Port Lyautey, via Bermuda, in 62 hours.

These airships patrolled the African coast, and also the Straits of Gibraltar, and after they arrived no more submarines got through the Straits. They worked within sixty miles of the battle front and shared aerodromes with aeroplanes, thereby saving manpower, working from mooring masts until the airship shed at Toulon was available. At one time a mooring mast was erected at Gibraltar and on one night an air attack was being made on the Rock while an airship was flying through the Straits.

Submarines did not apparently dare to attack an airship when the latter was with a convoy, and only one airship flying alone was shot down by an enemy U-boat, this was the K.74 on 18th July, 1943; even then only one of the crew of eleven was killed. No less than 35,000 operational flights were carried out over the Atlantic, and 20,300 over the Pacific, making 55,300 operational flights in all. 380,000 hours were flown over the Atlantic, and 170,000 hours over the Pacific, totalling 550,000 flying hours; 87 per cent. of the airships were always available for action—a record among all aircraft. Most significant of all, 89,000 surface craft—77,500 in the Atlantic, and 11,500 in the Pacific, were escorted without the loss of a single vessel. It should be added that 50,000 of these were sailing in areas in which submarines were known to be operating. Vice-Admiral C. E. Rosendahl, U.S.N.—that tireless advocate of the airship, was Senior Airship Officer at the peak of operations and until the end of the War, when he was relieved by Rear-Admiral Settle, U.S.N.

Towards the end of the War the airship's importance increased with the advent of the snorkel U-boats. In 1945, these improved submarines were cruising round the coasts of the United Kingdom, and the Royal Air Force, which had abandoned airships in 1921, asked the U.S. Navy to send over K. class airships to help to guard the Western Approaches; but the War was over before they could arrive.

Airships were also employed by the U.S. Navy to co-operate with minesweepers. In the Mediterranean, after the U-boats had virtually disappeared, they worked with the British minesweepers, especially with the 19th Minesweeping Flotilla, and British naval officers went up in them to direct the operations. The airships could give the exact position of a mine, which the aeroplane could seldom do, and the

sweepers were warned when a mine bubbled up to the surface. The airships could patrol unswept areas and, in the clear waters of the Mediterranean, submerged mines were fairly easily seen. They could also fly ahead of the minesweeping flotilla and give warnings by R/T.

Airships were often used to direct the formation of convoys, and they served up to twelve hours per convoy. They had the great advantage over all other types of aircraft for close liaison work with surface craft or ground forces in that, when necessary, they could hover silently, and even talk to those below by megaphone.

Air-sea rescue work was another activity, and some eighty flights were made for this purpose. On one occasion the survivors of an aeroplane crash were rescued from a swampy Brazilian jungle by an airship.

#### PRESENT DAY AIRSHIPS

Since the War the submarine has been developed still further, and the true submersible has arrived. But the airship's power of detection has also improved, and a U-boat can be picked up when several hundred feet below the surface. When a submarine is "snorkling," the airship, with its ability to fly slowly and its numerous crew, has a better chance of picking up the slight feather than the very much faster heavier-than-air craft. With several methods of detection at its disposal the airship can make full use of its power of flying on the darkest night and in the thickest fog, and it is under these conditions that faster aircraft are handicapped. This is one of the reasons why the airship is being developed by the U.S. Navy as part of the anti-submarine team.

At the present moment the American airship organization consists of Airship Wings made up of Fleet Airship Squadrons. These are based on Lakehurst and Weeksville. There are also in use the war-time base at Glynco and a mooring-out base at Key West. The senior airship officer is Captain Bradley, U.S.N., and Captain Watson, U.S.N., commands the Airship Station at Lakehurst, the former being in immediate control of all training and experimental airship work.

The aerological and parachute schools are also at Lakehurst. Here, too, are the Airship Training School for regulars, Reserve Airship Squadrons and an airship experimental section. The airships belong to the U.S. Navy and will continue to do so, as their work is purely naval.

There are at present four classes of airships in use. These are the L. and G. classes, which are mainly used for training; the K. class, which are the most numerous; and four ships of the M. class. One of the latter—the X.M.I, holds the World's record for unrefuelled flight by remaining in the air 170 hours 17 minutes in the Autumn of 1946. The K.'s can fly for over 50 hours at 46 m.p.h. In addition, a larger N. class is being developed (see Appendix).

A Reserve Squadron is maintained for training and Reservists come from all over the United States at their own expense. They have nearly 100 per cent. attendance of war-time airship pilots and crews who have retained their enthusiasm for airships. Most of this training takes place at week-ends. In addition there are fortnightly courses for others who come from still further afield. Up to August, 1949, 3,000 flight hours had been flown by these Reservists in one year.

The training course for Regulars lasts about a year and includes free ballooning. The Regular pilots under training have all come from heavier-than-air craft, and airship pilots who are not yet qualified to fly aeroplanes are to be trained to do so.

It is hoped by this means that the senior officers of the future will know how to employ both aeroplanes and airships to the best advantage.

Much was learnt by employing two airships in co-operation with the aircraft carrier "Sicily" in the Caribbean exercises during March, 1949. The airships helped to locate and "destroy" no less than eight submarines. They worked far out to sea and away from their shore bases. Further exercises on these lines are to take place. In addition, frequent training exercises take place between airships, aeroplanes, submarines and ordinary surface craft. Fairly recently, when airships and aeroplanes were both ordered out on night manœuvres, the weather was too bad for the aeroplanes, but the airships took off and carried out their allotted task.

# EXPERIMENTAL WORK

All this keeps the staff at the experimental section at Lakehurst busy. First and foremost they are continually at work trying out improved methods of detection. These, of course, are secret and cannot be disclosed. They are also engaged in improving methods of handling airships aimed at a reduction of ground crew and of evolving an all-weather system. Every effort is also being made to make airships easier to fly.

#### HANDLING ON THE GROUND

As regards this question of handling: airships used in the 1914-18 War were nearly always man-handled and left the ground slightly heavy. A few British airships were fitted with swivelling propellers, and these could rise vertically in the same manner as helicopters. In 1916, however, the late Captain Boothby, R.N., fitted the Coastal airship C.11, based at Howden, with a wheeled undercarriage, and on 21st August she took off 200 lbs. heavy by running along the ground and rising in aeroplane fashion. To-day this method is in daily use by U.S.N. airships. The G., K. and L. types have a single wheel under the car; a tricycle undercarriage is being tried out on X.M.I. The former ships can take off 4,000 lbs., and the M. class up to about 6,000 lbs., heavy. This enables either larger crews or more detection equipment to be carried, and the airship's radius of action is increased. A further advantage is that, if the airship leaves very much heavier-than-air, the pilot can so regulate his speed and fuel consumption that he is still heavy on landing. Thus, there is no need to valve helium when coming down. If there is sufficient room, the airships often land on their wheel and taxi up to the landing party. This saving of gas is important, for helium can be purified and this can be carried out without deflating a ship. Then again, when an airship is deflated—probably after eighteen months to two years continuous inflation—the gas can be stored and used again.2

Besides being pioneers of the heavy take-offs, we can claim the mooring mast as a British invention. The method at present employed is mainly due to the late Major G. H. Scott, and he had the advantage of the numerous experiments carried out at Barrow by Air Commodore E. A. D. Masterman between 7916 and 1918, in addition to Farnborough experiments with the Army airships. The Americans have reaped where we have sown, and have made great strides forward.

Formerly, too, airships were walked out of their sheds and then put on the mast. American airships to-day enter and leave their sheds while actually on the mast; the mast being towed by a tractor. The men who used to man the car and bow guys are now dispensed with while the ship is on the mast, the after guys alone being

<sup>&</sup>lt;sup>2</sup> All U.S. airships and free balloons are inflated with non-inflammable helium.

manned if there is a wind. When the ship is off the mast the men on the after guy have to be transferred to the car and bow guys. In spite of this the 426,000 cubic feet K. airships can be handled by 36 men, whereas our smaller 360,000 cubic feet airships—North Seas and Parsevals, would have required something like three times that number when under comparative conditions. Thanks also to the wide sheds, the U.S.N. airships can enter and leave when the wind is blowing between 20 and 30 m.p.h. across the shed door.

In order to economize still further on the size of handling parties, mechanical mules are being developed. These are heavy trucks with wheels which can swivel through 360°, and it is intended to attach the trail rope and two bow guys to the bollards of these mules and so haul the airship down by winches. To minimize sudden loads the winch drive is extremely flexible, and the clutches slip if the load is more than 2,000 lbs. It is believed that, when perfected, ground handling will be so mechanized that only eight or ten men will be required. Even now the airship requires less men per hour and mile flown than the heavier-than-air craft.

#### RELIABILITY

Experience in the late war showed that whenever airships and aeroplanes were working in the same area they could fly for about the same number of days per year. This was so in the Mediterranean when the airships were working entirely from mooring masts nearly all the time they were there. High ground winds hamper the airship, while bad visibility is the aeroplane's chief enemy. On four occasions when the German airship "Hindenburg" was leaving Lakehurst for Europe in 1936, the aeroplanes which were to bring her passengers in were unable to fly. The airship, however, left on time, although on one occasion a hurricane was blowing off the coast of New Jersey.

Thanks also to the mooring mast, bases can be established with relative speed, and almost anywhere. No runways are necessary nor blind landing equipment. An airship is not tied down to an elaborately prepared base, as aeroplanes are apt to be.

The airship's great handicap is its vulnerability. But to-day it cannot be shot down in flames so long as the fuel tanks are protected, for it is helium inflated, and radar gives warning of an attack. It will normally work with convoys or surface ships and, if in danger of attack by enemy aeroplanes, can close and fly low under the protection of the convoy's anti-aircraft guns and fighters. Nor would its operational value be decreased, for some of the electronic devices can be used effectively when the airship is flying under a hundred feet above the surface. At worst—thanks to helium—the crew would probably survive even if their airship was brought down.

#### **NEW CONSTRUCTION**

Next year the United States Navy hope to take delivery of a new ship—the N.I. This will be the biggest non-rigid airship ever completed, with a volume of 825,000 cubic feet. She will be 320 feet in length, and have a diameter of 71 feet and be driven by two 800 h.p. motors giving her a speed of over 77 m.p.h.

Every effort is being made to make the airship as easy as possible to fly and maintain in the air, e.g., the two motors will be in-board so that mechanics can work on them in comfort. The 87 ft. car will be double-decked. A double crew, totalling some 14 officers and men, will be carried and she is destined for flights of long

duration. She will be able to refuel from ships and pick up ballast from the sea. The N, I will be equipped with an automatic pilot and a tricycle undercarriage, and her car will be loaded with electronic devices for detection.

#### THE FUTURE

As the result of war experience the Navy Department has more faith in the non-rigid airship than ever before. It is expected that the new N. class will allow convoys to be escorted over great distances: there is no reason why a convoy should not be under effective airship escort all the way across the Atlantic. The present K. class will probably be used in conjunction with carriers for distances up to about 200 miles from the coast. The L. and G. class make ideal training craft, and are being retained for that purpose.

The new Fordison Rayon fabric, which is now being tested, may, owing to its strength and lightness, allow of higher internal pressure, and so maximum speed may be increased. This will make the airship more of an all-weather craft, as flights could then be made in higher winds. The faster submarines will also be dealt with more effectively. In fact, the airship's value increases with the development of the submarine. Tests have shown that it is superior to all other aircraft for both instrumental and visual detection of the *snorkel* type of submarine. That is why it is being retained and developed by the U.S. Navy.

Bearing in mind that, as an island, we are entirely dependent for supplies on seaborne transport and are peculiarly vulnerable to submarine warfare, we should not be ostrich-like on this question of airships. They served us well in the 1914–1918 War, and our Allies from 1942–1945. Given a chance they might well do so again.

APPENDIX
U.S. NAVAL AIRSHIPS, 1949

Type	Volume cubic feet	Length feet	Diameter feet	Horse power	Remarks
G.	200,000	190	45	440	Max. speed about 65 m.p.h.; used for training.
K.	{425,000 450,000	251.7	57.8	850	Max. speed 77 m.p.h.; operational.
L.	123,000	150	46	290	Max. speed about 63 m.p.h.; used for training.
M.	£625,000	284	73	1,100	Max. speed over 77 m.p.h.;
	{625,000 725,000	308	68.3	1,100	operational—long-range and for use in high
N.	825,000	324	71	1,600	temperatures. Under construction at Good- years, Akron.

#### AIRSHIP PERSONNEL

1941 ... 100 Pilots, including actual Reserve and Students. 100 Air-crew men.
 1945 ... 1,500 Pilots. 3,000 Air-crew men. 706 Ground officers. 7,200 Enlisted men.

About 40 hours were flown per man employed between 1942 and 1945.

# THE SERVICES IN THE FAR EAST

By Admiral Sir Denis Boyd, K.C.B., C.B.E., D.S.C.

On Wednesday, 16th November, 1949, at 3 p.m.

GENERAL SIR NEIL M. RITCHIE, K.C.B., K.B.E., D.S.O., M.C., in the Chair

THE CHAIRMAN: No words of mine are really necessary to introduce our Lecturer to-day—Admiral Sir Denis Boyd, for his career is well-known to us all. He will talk to us on "The Services in the Far East." Having, until quite recently, been Naval Commander-in-Chief in that part of the World, there is nobody better qualified to speak with the greatest authority on this subject.

# LECTURE

HAVE been asked to give you a talk on the Services in the Far East—a wide term of reference giving me a free choice of many aspects of our work there. I could of course talk of the past or, using what ingenuity I possess, give you a study of the future. But in this cruel and meaningless epoch behind the bars of which I speak neither past or future seem to have any existence; only the present, and that contains nothing but the dead ashes of the past. So, omitting details, I propose to sketch the background of our problems in most general terms and suggest their solution, where there is any, by the only sure tribunal in this World to-day—our national conscience and our common sense.

But first a reminder. I met a girl aged 21 last week who, at 15, was with her parents in their bungalow on a rubber plantation in Java. They survived their Prisoners of War time, but the most vivid memory of that girl was listening in to the British broadcast for the last time. The Japanese were only 500 yards away and this family listened in to the accompaniment of enemy bullets and shells. Then came the news in English: there was not much going on in Europe but there was no mention at all of the Far East, and the loneliness of desertion sat with that family for a terrible three and a half years. This is by no means unique. One felt oneself far away, not so much by distance which is not great these days, but from the thoughts of Britain. During my period of command the situation in Europe and the Middle East occupied the thoughts of everyone at home and indeed in America. But when the Berlin Air Lift declared our vivid intention in Europe the whole situation in the Far East altered its appearance. Were the two things connected? I firmly believe they were; but this caused no change to the indifference to our problems. There was a very definite feeling among the thinking men in the Far East that there was a lack of Far Eastern policy, and that Far Eastern representation at the Foreign Office ought to be on the Under Secretary of State basis.

I include this in my talk as it is apposite to the general reminder that the Far East is a neglected area. It is not without interest that after two and three-quarter years as Commander-in-Chief I came home filled with a wide experience of the whole area and a great enthusiasm for the problems but, apart from the First Sea Lord, absolutely no one took the slightest interest in my return. At first I couldn't believe that this was true. I asked to see the Colonial Office and Foreign Office but was informed that so and so was away or busy and I would be contacted later. That was in March. I have no false opinion of my knowledge and understanding, but I was the only man in the whole Far East who every year met every important man—Ambassador, Governor, McArthur, Chiang Kai Shek, and, just as important, the wise

business men of Shanghai, Hong Kong and Tientsin. I have ears and I heard every opinion. I felt humbly that possibly this might be personal, so I appealed to a most distinguished previous Commander-in-Chief, and he said that not even the First Sea Lord saw him on his return!

Another reminder which is necessary is the size of the area and the time taken on passage. I only mention this because operationally the area is difficult, as we found during the War. It was almost impossible to do anything on arrival anywhere owing to lack of fuel, and any operations in the Far East must carry their own means of supplies. One was tempted at times to believe that the operation rooms at home had a map of the Far East hanging alongside one of the coast of Palestine and that the charts were the same size. For example, I was ordered to send a cruiser in the middle of the regatta period in Japan as far as from Plymouth to St. Helena in order to allow the Commander-in-Chief, East Indies, to fulfil his programme of visits which would otherwise have been put out by one week.

#### WEATHER

Another reminder—the weather. In pre-war days the Fleet moved to Wei Hai Wei in the Summer to avoid the typhoon season. Now we have to ride it out, dodging the infernal things as best we can. From June to November the menace is ever present of storms which are so fierce that no one would, and few could, accept them without damage and casualties. To the list of famous last words should be added the wife newly arrived who said, "I'm longing to see a typhoon." My own experience of one was a fairly good example; while ashore in Hong Kong with a wind of 106 miles an hour-a wind of 150 miles per hour is not unknown-my tennis surround net supported on steel tubes well guyed was lowered to the ground but ballooned out and bent the steel posts out of all recognition. One of the enormous number of casualties will give a slight conception of the terrific force of such a wind: an old Chinese lady, fearing for her hen house in the back yard, opened her window to see if it was all right and simultaneously her grandchild opened the door. Granny went through the window like a cork from a bottle and was found some fifty yards away. I rode out another typhoon in a frigate in a little Chinese harbour. That was a miserable four days. We were trapped on a lee shore with the worst storm of the season coming straight at us. So bad was this storm that visibility was nil for over 48 hours, during which the rainfall must have been measurable in many feet. We went right through other storms off Japan as they were patently tiddlers; but some combined manœuvres with the American Fleet were made into a very hair-raising period by a sea and a visibility which were, to say the least, awkward.

The path of typhoons is fairly well-known within certain limits. The difficulty is to get sufficient information of their progress, again owing to the great distances and also to the fearful inefficiency of the Chinese. The island of Pratas—a meteorological station, was taken over by the Chinese and at once began a series not of weather reports but of appeals for food, as the relief ships, if ever sent—which I doubt—never turned up. Our one solid rock was an odd one. An aged Italian Jesuit priest in Zicawei college, Shanghai, had devoted his life to the study of weather which causes the loss of thousands of lives every year. His reports were always more reliable than any but our own meteorological station at Hong Kong. Apart from these two the least said soonest mended. It is not without interest that Father Gherzi is working on long-term forecasting by a study of the variations of the Heavyside layer.

# \* ORGANIZATION

When I arrived in June, 1946, there was an acting Supremo in Singapore. One felt the Far East was a bit over-managed. We had a Supremo and the Far Eastern Whitehall in Lord Killearn and his gigantic set up, and a Commissioner General and a full suit of Governors and Commanders-in-Chief. The Supremo conception was dying hard and from many points of view it is a pity it died at all. The Command Organization, when it died, became a defence committee of the three Commanders-in-Chief, with the Commissioner General as chairman and Lord Killearn as a member until he left without relief.

This organization still stands but there was a deal of tidying up to be done. First each Commander-in-Chief had a different area and title and responsibility. Some were Far East like myself with a station stretching from Christmas Island to the North Pole and from Fiji to Nanking. The Army Commander-in-Chief had Ceylon and South-East Asia with Hong Kong. The Air Commander-in-Chief had South-East Asia and Hong Kong. Over us our chairman had a sort of watching brief over the Colonies and Federated Malay States but no jurisdiction over any Governor, and even over defence matters no executive powers. A change both of title and orientation was urgent and necessary, as trouble, when trouble came, was bound to come from the North.

Another change occurred about this time because we had a visit from a distinguished Field-Marshal. He, quite rightly, had inter-Service co-operation in his heart and on his lips, and was appalled (his word) to find the Naval Commander-in-Chief was based on Hong Kong and the other Commanders-in-Chief at Singapore. The visits of my ships which were of such interest to me and value to those visited were, he said, the job of the Second-in-Command, and I must live at Singapore and co-operate. Now I assure you that I did not need anybody's order to co-operate with Malcolm MacDonald and General Ritchie: they had only to express a wish and I, and everyone else for that matter, would do their utmost to comply. But this word—this two-edged weapon—"co-operation," is only possible when you have the means to co-operate, and our forces were such that we could do no more than fulfil our basic task of policemen. I maintain that there was no lack of co-operation. I had visited Singapore four times in a year and co-operated whole heartedly in the one constant Far Eastern problem of eating and drinking. Of course, I readily admit how much I appreciated actually living in Singapore, because of the closer contact with my brother Commanders-in-Chief; but we had no means of doing anything together other than think. To help us in this task we had had a Combined Services Planning Staff which we strengthened. They produced most admirable papers with which everyone agreed (as it was too hot to do anything else), and with which (for the same reason) very little was done. We did not have a Combined Logistic Planning Staff as there was no foundation on which to build. We had a Combined Intelligence, and again strengthened that, though I will expand on this subject later. It was annoying to me to be forced into this very willing, meaningless geographical co-operation just at the time when the centre of trouble started to approach the British interests in the North at Shanghai, Nanking and Hong Kong. It must have been still more annoying for my relief.

But what should the Organization be? This is delicate ground, as it involves the Empire. The centre of military organization and supply in the Far East should of course be Australia: one keeps fit and can think in Australia; there is industry to back up supplies; and manpower. It is not generally realized how inadequate

our resources are to meet the Imperial Policy. There is no longer that great reservoir of trained soldier manpower that existed, before the War, in India. The logical place for Far East reserves is Australia, and this is the logical place too for the Commanders-in-Chief and their staffs. In Singapore there is nothing. We create our own dockyard workmen and when one dies we are one less. We cannot get one from a pool of tradesmen because there are none, other than joiners. The R.A.F. have to import all their skilled men; so do the Army. Singapore is the last place on Earth to use as a main base in a modern war, but in the absence of Empire planning it is the only one. I must leave it at that, hoping that wonderful word "co-operation" will find its way into Empire planning in the near future.

In conclusion, in referring to the Organization as it was, I must pay tribute to that great man, Malcolm MacDonald, who, although he infuriated us at times, made quite *impossible* "terms of reference" work, and work well, by his amazing charm and great ability.

# INTELLIGENCE

Of Intelligence I would only say this-there is a vital need for "cold war" intelligence. No longer is military intelligence of prime value, if indeed it ever was. Intelligence is now a most skilled job requiring not only an acute organization to collect and first class brains to assess it, but it is a jumble of local and political, civil, police, military, and spiritual affairs, and each has its own sources and requirements. The duty of our intelligence services is to organize intelligence so that the integrity of it is assured—i.e., that there is no parochial ban imposed by any authority on intelligence facts and assessments. There is one way to do this which has been tried and is quite efficient with the secret police of Germany and now of Russia, who are responsible to no one but the head man. The American chiefs of intelligence are, I believe, responsible to Congress, not to their Service chiefs. I hope we never adopt either of those systems, but we may have to if we do not organize ourselves and appoint our best men to do the job. We are trying, but there is so much more to be done if we are to have anything but a recording service. I feel that what we want is to attack, not just record. It is true this in peace-time appears to be a civil commitment, but if intelligence is to be valuable it must be constructive, and where action is concerned it is impossible to segregate civil from military interests. Action on facts is, of course, the job of the operational staffs, but what are facts in a battle of wits?

Nothing is clear cut. The lies and use of propaganda by the other side has to be countered by a sparkling wit—a sort of mental operational staff, who must be wrapped up in intelligence knowledge. It is, I believe, right that there should be a gulf fixed between those who provide the knowledge and those who originate action on it, and the dangers of combining the two have been frequently proved. It therefore really looks like having to create a new breed. We form signal corps and electrical branches and a multitude of air specializations, very rightly—why not an intelligence operational staff trained in, soaked in, the job of winning the cold war. Perhaps it does not need a branch but it certainly needs men of high mental quality, both to assess the information and present it, and still more wise to take such action that, instead of just answering as we do, we shall in the future set the pace and let the Communist do his shabby best to follow.

The lecture on "Scientific Intelligence" by Professor R. V. Jones, C.B., C.B.E., published in the JOURNAL for August, 1947, deals with various aspects of this important subject.—Editor.

#### • IMPERIALISM

This seems to be the time and place to comment on something which is odd. Imperialistic Powers are not very popular. Their down-trodden peoples are seeking self-expression. Who says so? Their leaders? Yes, indeed—self-appointed power seekers who claim to represent their people, people who are usually quite inarticulate, so how do they know? Imperialism is wrong we are told, and we should no longer take advantage of native populations and cheap labour. We should clear out. Let me remind you that the end of the Roman Empire with all its faults was followed by 400 years of the most appalling universal misery, known in history as the Dark Ages.

There is no doubt that where we have cleared out and where we may clear out there is, and there will be generations of misery for those who, under our rule, were infinitely better off than they ever will be again. To a degree the same thing applies to the Dutch in Indonesia and the French in Indo-China. Who is doing this? It isn't anyone who knows what we have done and will do in our Empire and our Mandated Territories. It isn't anyone who has the good of the people at heart except, in this case, political theorists who know neither natives nor nabobs and whose world is composed solely of "capitalists" and the "poor." Well, in a year, over five million of those poor have been massacred by those poor in India. Burma will never recover and has joined the march of those who will accept the stability of Communism as preferable to the chaos they will be in.

I only mention this terrible, damnable expedient of pandering to an anti-imperial vogue because its results surround the Services in the Far East. In our home base it weakens authority by giving any authority an unwarranted smell of autocracy or dictatorship. It has taken Countries on which we might have relied and turned them over to unstable governments, and it has dressed murder, arson and rape into the noble surge of "self-expression" by people who were reputed to be suffering under our yoke. It has made our policy with native populations subject to prejudiced theory rather than practical knowledge.

All this applies to the Dutch and the French too. You should have read the Australian press on the subject of Indonesia. No one would claim the Dutch were without faults, but the result of this barrage of ignorant criticism will be the misery of millions and the end of justice and mercy in that Country because there is no alternative to Dutch jurisdiction there—that is if you wish the natives well.

#### COMMUNISM

I make a heading of Communism in this talk because the whole Far East is in its grip, and an understanding of its evil and some attempt to counter it is our chief Service, and indeed national, problem. China is now Communist. There are two schools of thought about that: one says that the Chinese are too old a civilization to take to Karl Marx and that, whatever they call themselves, they will remain Chinese—bogged down by a national stupidity that has to be experienced to be believed; the other, and this is what I believe, is that China is Communist in exactly the same way as Russia—that is to say, there is a small virile core which, by utterly ruthless means, will control and bend to their will the 450 million Chinese, and a happy fey type of mankind will become something grotesque, just as Molotov and Co. belong to a sort of devil's Alice in Wonderland.

Communism is being fought in Malaya. It occupies some 30,000 troops and 25,000 police to keep at most 5,000 Communist bandits quiet, and we shall have to go on—and have said we will—until they are exterminated. One aspect of this is

the enthusiasm and leadership of the bandits, all of whom are Chinese. This surely is an example of the power this evil way of life has in getting men to change their nature. How can we compete with such enthusiasm when we differ, yet are diffident, over the only thing of which the Communists are afraid—our ideology, our religion. Coming as I do from three years in a wholly pagan Country, it was pitiable to see the wise Chinese look cynically at our various Churches, each professing to believe in the God of Love and each saying the other is wrong.

What has this to do with the Services in the Far East? This war, cold or hot, is primarily that of a way of life: one the Communist, anti-God, anti-social, purely material; the other the Christian way, and we in the Services represent not only what is best physically but we are disciplined, free men—the cream of our Country, and where we are not we must set about it and make it so. The first thing is to live as Christians; the second is to fight the Communist, not with his own weapons, but by using truth with skill; and thirdly, we must have people who believe in our greatness and who will teach and work and beat the fearful Communist by a thing he does not like and that is exposure, because just as Russia dare not let anyone see her abject population and rigs a curtain of funk to prevent it, so a similar drab curtain is being rung down over China.

#### HONG KONG

This wonderful and beautiful city is very much in our minds at the present moment. I can only say we are some three years adrift and should have thought of it before. The organization at Hong Kong was as follows. The Governor was the Commander-in-Chief of the local forces represented by the "G.O.C., "A.O.C." and Commodore Hong Kong. The local defence committee was composed of these officers and government officials. The enemy, if any, was banditry and possible local War Lord activity, and the garrison was adequate. In 1946 we did not foresee the sudden collapse of Nationalist China, though some did. We hoped for China's sake that Chiang Kai Shek might pull China out of the mire; we believed he could, and I still believe he could have done so had he thrown away the old gang and declared himself on the side of the Vice-President, even in 1948. But he did not: he appointed the head of the Kuo Min Tang as Prime Minister, and from that moment it was only a matter of months before the utter military stupidity of the Nationalists brought about their collapse, and they were no longer supported by any public feeling whatever.

But this sudden collapse necessitated a very rapid decision, as it was patent that Hong Kong would very soon be surrounded not by Nationalist China but a Communist China. A rose by any other name smells just as sweet, but is it a fact that it is only a change of name? That we do not think so is shown by the very happy, though much delayed, action of reinforcing Hong Kong and the appointment of a military Commander-in-Chief. I am not clear how this appointment fits in with the Governor's terms of reference, but I have no doubt that it will work owing to the calibre of first Festing and then Mansergh and also that of the Governor—Sir Alexander Grantham, for whom we all had the greatest respect.

Our first problem was a domestic one. There is no hope of fulfilling the half-made promises of a golden age when there will be married quarters and short commissions—they are neither possible nor even desirable; so we have got to do the best we can with what we have. Our men in that area are surrounded by the vice of the Far East and this is presented to them in a climate which conduces to incontinence. It was therefore a bit disturbing to us with our particular responsibilities that first

we should receive the Government's benediction on religious indiscipline, and then that our tenure of sports grounds should be weak and unsupported; indeed, we felt we were merely pawns in a game which was making Hong Kong a place fit for Chinese to live in.

Political Chinese ask, "When are you going to give us back Hong Kong?" Give it back—they never had it. We built Hong Kong from nothing. It was a small fishing village and a malarial snipe marsh. Now it houses two million people, trains thousands of Chinese as students, lawyers and doctors, and if we for one moment let our grip on Hong Kong relax the whole thing would collapse as every public service has in those places from which we have retired.

The major military problem in Hong Kong is, I suppose, air defence. We have one small airfield tucked well in under hills which are 1,500 ft. high. There has been much discussion on the building of an alternative airfield, the site suggested being on the borders of the New Territories; aircraft using it would be within rifle shot of any ill-disposed person on the border. So we just have Kai Tak with all its disadvantages. These are not as great as is frequently supposed and I believe that airfield had a remarkably high percentage of safe landing days during a busy year of civil aviation.

There is really only one road in the New Territories, and it is difficult country; but I should say—and our Chairman can confirm—that it is easier to defend than it is to attack.

From the naval point of view Hong Kong is for five months of the year an ideal training base—in sharp distinction to Singapore, and apart from the nuisance value of typhoons and its three intolerably hot months, it is good all the year round. Ships can slip from their buoys in the harbour and be in the practice area within an hour; this is a great advantage in peace, when oil is like gold and very nearly as expensive. There was a movement while I was there to get rid of the dockyard from its present position in the centre of the town, where it occupies land worth heaven knows how much. The alternative was a site on the other side of the island outside the town defences with no provision for the 5,000 workers. The cost would have been anything above 30 millions. There is no importance in this, other than as an example of how little Hong Kong realized the development of the war against Communism. It speaks poorly for our basic intelligence, which should have warned us how near was the complete downfall of China. We continually underestimate the power of Communism and others continually underestimate the stabilizing effect of the presence of the Services.

The Army problem in Hong Kong is accommodation and employment. I left before any reinforcements arrived and have no idea where the numbers now there are accommodated or how they are kept out of mischief; I am sure they are, but it is a very major problem and is, if I may humbly comment, made more difficult by the apparent cluster of first class officers on the various staffs rather than with the regiments.

The defence of Hong Kong has long been a matter for extremely divergent opinions based generally on very different scales of attack. It has been for a long period very much in my mind that had we had a bit of prevision and not been financially ruined we should, and I think could with America, have occupied Formosa with the help of its people and to their intense gratification. From the date of the massacre of Taipeh when the Nationalists finally proved their fundamental ineptitude, we

could have saved the island. But now Chiang Kai Shek is there to complete its ruin-I only mention this lovely island because it could have contributed so much to the defence of Hong Kong and the control of the coast of China. But the milk has been spilled.

#### INDO-CHINA

I have already mentioned this tricky area where, unsupported by any policy from home, the French forces keep an uneasy peace while a rich Country ruins itself. It was from the Cambodian airfields that the "Prince of Wales" and "Repulse" were sunk—it could be from those same airfields that Malaya too could be sunk. No one does anything: the Americans will not, we cannot, and the French dare not. So the whole peninsula of Cambodia, Laos and Annam is a danger spot which might flare up at any moment now that China is Communist. Fortunately, there was complete understanding, both militarily and socially, between us and the French. I am happy to think that in a humble way my ships contributed to break down that sort of reserve which has characterized French relationship, particularly naval, since the War. Monsieur Bollaert, in his farewell signal, said of my sailors "Ces sont les ambassadeurs veritables." This referred to an incident which had pleased him. I had spoken to the sailors before our arrival and had said that theirs was the task of fulfilling their ambassadorial role. One of them-rather drunk, with his arms round the neck of two French sailors—was heard to say: "Do you know what I am? I'm a bloody ambassador. 'Tsright, the bloody Admiral said so!''

#### JAPAN

We had representatives of all three Services in Japan until 1948. We have now withdrawn the United Kingdom forces, leaving the Army of Occupation to Australia. There is, therefore, still an Empire commitment and problem there. The problem is a normal post-war one, as both ourselves and the Americans cannot afford regular troops for the Army of Occupation. No one could have a higher regard for the United States high command and senior officers than we had; but we destroy the altars of the herrenvolk and we substitute democracy, imposing it on peoples who are historically unprepared to receive it and temperamentally unsuited to it. We have not, except by some remarkably fine private enterprise, even attempted, as far as I am aware, to make either Germany or Japan think aright—all we ask is that they should vote, and the result is to my mind inevitable: the will of a people used to being commanded will merely instal a commander of possibly as curious an origin as our late disturber of the peace. The will of an evil people will be a summary of evil. The will of an inarticulate people is open to the play of Communism, which masquerades in Japan—as it does here—in the fancy dress of a political party.

Nothing could exceed the wisdom and power of MacArthur. Power does not apparently always corrupt, but Britain's best ambassadors are said to be her sailors and soldiers and airmen and he, McArthur, can, alone, achieve no lasting effect on Japan unless his nobility, selflessness and sternly disciplined life are reflected in his Countrymen. Japan is working hard and is rapidly getting herself out of the utter despair and misery of the first post-war years. McArthur has said she is ready for a peace treaty, after which the fear is that the U.S.A. may leave her to her own conception of democracy, and I will take odds on Communism winning the consequent ugly rush. I know of nothing to stop this happening, as even McArthur cannot live for ever. He referred to Japan as a bulwark for peace and a springboard for war.

#### THE COLONIES

From the military point of view the Colonies of North Borneo, Brunei and Sarawak-that is the whole North West Coast and hinterland of Borneo, do not come into the picture. Apart from landing strips suitable for twin-engined aircraft, there is nothing there. Such local forces as exist are police only and the development of the peoples does not warrant any expenditure yet on creating anything more. The problem of these Countries is poverty. They are naturally rich but, apart from oilfields under the sea off Brunei, quite undeveloped. Their future depends on wise development, but as we are now nationally very poor and as it is our national policy to do away with both private income and private enterprise, it is difficult to see where the money is coming from. There is always, when you have a mixed population such as exists in these Colonies, a chance of trouble. The Chinese, many of whom have lived there three or four generations, have definitely remained Chinese owing loyalty to China. Will they continue to do so now? It will be a headache if they do. The Malays are potential trouble makers because of the surge of self-expression, as it is called, which has bitten every Country in the East. They are bound to be affected by the Indonesian States, though it will not be the better men who are so affected: the thinking men know on which side their bread is buttered.

The native population, such as the Dyaks and Bruneis, are not as vivid or as educated as the Chinese and Malays, and their likes and dislikes are therefore less affected by theory. They are for the most part content to work when they require food and still more content to do nothing when they are fed.

Although the set-up looks dangerous, I think that this area, owing to the happily autocratic rule of first class Governors, is better off than anything else in the Far East.

#### CONCLUSION

There, then, is my picture of the problems of the Services in the Far East. It was my privilege to serve there during the years which saw the downfall of China, the end of Burma, the neutralizing of India—and confusion over all that part of the World. The whole of life and its background is being dissolved to chaos before our eyes. There is only one stable thing left—one small candle burning in this darkness, and that is our presence in South East Asia and Hong Kong. Must we, and we shall be asked, apologetically bow to an imaginary will of the people? Surely it is our conscience that should be consulted. Have we the right to abandon those who trust us? We in the Services are the servants of that conscience. Please God, England will do what is right and not what is expedient, and that we shall be courageous and wise enough to fulfil her wishes.

#### DISCUSSION

CAPTAIN ALTHAM, R.N.: May I give a lead? I will put my question like this. Have the capabilities of the Services to meet our responsibilities in the Far East of late suffered, not merely from, in the case of the Navy the lack of ships, and perhaps in the case of the other two Services from lack of numbers, but in the case of the Navy more particularly from the lack of aircraft carriers which might, in co-operation with such other forces as are out there, have done, and still do, more than is possible without them?

THE LECTURER: As a Commander-in-Chief I would always rather have had more ships than fewer; but to say that you would be able to use those ships regularly on the coast of China is not altogether true. I did not deplore the carriers going home; but what I would have liked was that they should have visited us at suitable times.

My idea was that the carriers should be based in New Zealand and come North during the first-rate shooting season—those glorious months which are not bettered in the way of climate anywhere in the World, i.e., from October to March—to Hong Kong where they would have had all the flying that any enthusiastic aviator could wish for and where they would make that showing which is necessary. In the typhoon season—as they will find—carriers are rather a drug on the market. Whether we could have done more on the Yangtse with them I doubt very much. I do not believe that they would have been able to be there any more than the Air Forces would have been able to be there.

A LADY: What co-operation is there between us and the French in the Far East?

THE LECTURER: The co-operation of the French in the Far East is a co-operation of good-will and not of material. It cannot be anything else. We have had nothing to give them. The co-operation of a ruined Country like France, which is more ruined than we are, is bound to be on the basis of "What can we give them?", but we cannot give them anything.

ADMIRAL SIR ARTHUR PALLISER: I noticed that the only Country which the Lecturer omitted from his tour of the Far East was Siam—a Country which has always seemed to me to have great importance because it touches so many other frontiers, including Malaya, and because it is, or was, one of the main rice producing Countries of the Far East. I wonder if he can give us any idea of the present state of affairs in Siam, with perhaps particular reference to the spread of Communism.

THE LECTURER: Of the mental spread of Communism in Siam I know nothing, but of the factual spread I can tell you that under our eyes there is now a Russian Consul at Bangkok with a staff of 500, while we have an Ambassador with a staff of 15. It is a most tricky part of the World, with the very trickiest and most unstable politics... They have something which I recommend to your notice, Gentlemen. Politically they have a Government and an Opposition, and then they have a most important man—an Elder Statesman. The Elder Statesman has a private army of 300 thugs, and if anybody makes a speech with which the Elder Statesman disagrees he is found in the ditch on the way home riddled with bullets from a Sten gun which is mounted openly in the front end of an Austin car. I suggest that that should be incorporated in our Constitution!

I do not know what intricacies and what muddled theories are occupying the poor and very inadequate lives of those charming people, the Siamese.

#### THE CHAIRMAN

Before I thank the Admiral for his talk this afternoon there are one or two things—two things really, which I would like to mention.

Sir Denis Boyd spoke about the lack of interest displayed in this Country in regard to matters of moment in the Far East to-day. I have not been back from the Far East very long, but I can assure you that it is one of the things that strikes me most: the lack of interest by the man in the street in, and the complete lack of knowledge of the complexities of, the problems that face us there. It appears to me that many people in this Country do not appreciate the importance of that part of the World to us. After all, within it there are some extremely important hard dollar earning areas. I think that it is lectures and talks such as we have had to-day that will assist in spreading knowledge about that part of the World and putting it over to the general public of this Country.

The other thing is the integration almost, as I think one might describe it, of the functioning of the civil and military organization, in its broadest sense, in combating cold war. The Admiral spoke very clearly on the subject of the importance of our intelligence services being integrated, not only throughout the three fighting Services but with the civil intelligence services too. That I consider, as he obviously does, a matter of the greatest moment.

But it is not there that it finishes. I am quite certain that the Admiral will agree that in almost every walk of life we have to be absolutely "like that" with the civil

intelligence services. I believe we are right in our teaching that, in the maintenance of internal security in our own possessions, we should look upon the problem first and foremost as the responsibility of the Civil Power. If and when the time does arrive to call out the Services, they are in support of the Civil Power and have to work in with them and adjust their organization to suit the Civil Power as much as possible. It is worth giving an awful lot if we all pull in the right direction in this extraordinarily difficult task of combating cold war. I am sure that the Admiral agrees.

May I on your behalf, and on my own as well, thank him so much, despite his comments about me at the beginning of the talk! We have served together for a long time in great harmony, I think I may say, and it has been not only a great pleasure but, if I may also say so, a great honour to be in this position in the Chair on this occasion when you—Admiral, have been addressing us. I thank you so very much for your very clear and most instructive talk. (Applause.)

The vote of thanks to the Chairman was proposed by Commodore Harrison, R.N.R., and carried by acclamation.

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## H.M.S. "CONSORT'S" PART IN THE "AMETHYST" INCIDENT

By COMMANDER I. G. ROBERTSON, D.S.O., D.S.C., R.N.

HE "Amethyst" story begins 10,000 years ago when the ancient Chinese were known to be a warring community. It can be alleged with certainty that complete peace has never reigned over the whole of China at any time since that first recorded period in her history. In more modern times it is only about once in a generation that the fighting has flared into conflagrations big enough to hit the head-lines; for example: 1842—British Expedition to Nanking; 1875—British Burma Road exploration party attacked; 1900—Boxer War; 1927—Civil War; 1937—Japanese assault, followed by the 1939-45 War and merging into the current Civil War.

These wars have had an increasingly adverse effect on foreign trade which by the beginning of this Century had become of very great value to such Countries as Japan, Germany, France, Italy, Portugal and the United States of America, with Great Britain clearly in the lead. The foreigners engaged in this trade were protected by extra-territorial rights, embassy guards, gun boats, and concessions in which they could take refuge from the plundering natives who are an inevitable offshoot of war.

In the course of negotiations since 1937, these safeguards were whittled down to practically nothing, with a consequent considerable increase in the life risk of the foreign traders and their families living at their places of work.

In the Autumn of 1948, when General Mao Tse-tung threw the Nationalist Armies out of Manchuria and started sweeping the remnants rapidly southwards, it became urgent to plan what measures could be taken for the safety and protection of British people at Shanghai and Nanking. The latter place remained the seat of the Chinese Government until April of 1949, and the Commonwealth embassies were inhabited by some 200 souls, all of whom looked to the Royal Navy for protection.

It was decided to station one large and one small, or at least two and preferably three small ships at Shanghai, and one small ship at Nanking. The steadying effect of the White Ensign afloat, and the British sailor ashore once again gratified and stiffened British inhabitants and their Chinese friends. The number of ships so disposed depended upon what the Chinese Nationalist Government would allow, and the resources of the Far Eastern Fleet which consisted of two cruisers, five destroyers and five sloops.

This fleet had also to provide two small ships for the standing patrol in Malaya. From time to time a bonus was received in the shape of the temporary loan of a destroyer or sloop from the Royal Australian or Royal Canadian Navies. These latter units were debarred from taking part in the Malaya patrol, or any activity where politics were likely to play too prominent a part.

By Christmas 1948, the Chinese Communist Army had reached the general line of the Yangtze River, but they withdrew a hundred miles or so in order to regroup for the Spring offensive. During the interval the Nationalists continued their attempts to negotiate a peace, but the Communist terms amounted to nothing less than virtual surrender, and negotiations broke down. At the end of March, pressure began to be renewed on the Yangtze line, particularly between Anking and Wuhu, about 150 miles above Nanking. In this area, bombardment by Nationalist sloops

and gun-boats is reported to have helped the Nationalist Armies to such an extent that they were able to prevent a crossing, at least until after Nanking fell.

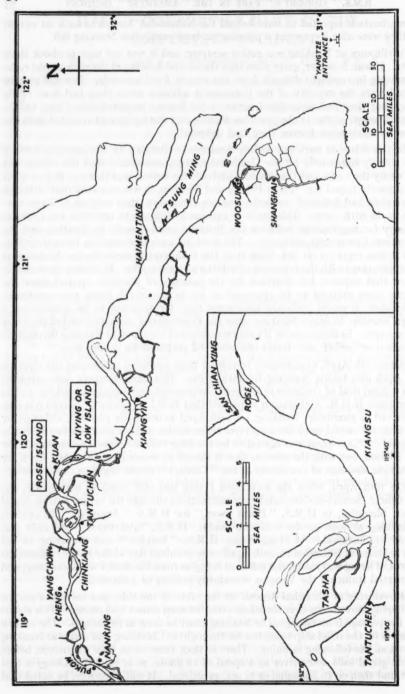
Intelligence at Nanking was rather scrappy, and it was not easy to check these reports. It was, however, quite plain that the annual flooding of the river would make the crossing increasingly difficult from the end of April onwards. It could also be deduced from the rapidity of the Communist advance when they had been really trying, that they had assimilated many of the lessons imported into China by the increased tempo of war in the previous decade, and the equipment received from the enormous Nationalist Forces they had defeated.

British interests were not unduly concerned. Judging by the previous form of cities already taken over by the Communists, they considered that the sooner and more easily the victorious Communists arrived, the better, and this was in fact what they sincerely hoped for. From Peking and Tientsin, it was reported that although Communists had behaved correctly towards foreigners, they refused to have anything to do with them. This made it extremely difficult to establish the contacts necessary for negotiations between the British Consul-General in Nanking and the appropriate Communist authority. The need for such conversation became urgent, when it was reported on 9th April that the Communists were placing batteries at Icheng (see map) with the intention of holding up river traffic. It became increasingly evident that requests for clearance for the passages of warships up and down the Yangtze were unlikely to be approved as far as the North Bank was concerned. Furthermore, it would probably take some time for approval to be granted for a foreign warship to leave Nanking after the Communists gained control of the lower Yangtze area. In consequence, if a ship was required to remain at Nanking throughout the take-over period, she should obviously be prepared for a long stay.

About 6th April, Communists broadcast their intention of crossing the river on 12th April and taking Nanking by 15th April. This announcement was naturally given a good deal of credence in Chinese Government and associated circles, and in consequence H.B.M. Ambassador requested that H.M.S. "Consort" should not now be relieved as guardship, Nanking, on 12th April as originally planned, although by that time she would have been up river three weeks, after a previous two weeks in Shanghai. This request was agreed to by the Flag Officer Second-in-Command, Far East Station, but with the proviso that it should be reconsidered on 16th April, by which time shortage of provisions in the "Consort" would begin to cause concern.

On 16th April, when the forecasted D-day had still failed to materialize, the Flag Officer, Second-in-Command gave instructions through the Senior British Naval Officer, Shanghai, in H.M.S. "Black Swan," for H.M.S. "Amethyst" to proceed to Nanking as soon as she could be ready. H.M.S. "Amethyst" had only just arrived at Shanghai. At Hong Kong, H.M.S. "London" was preparing to sail so as to arrive at Shanghai on 20th April—the eventual day of the battle. Meantime the cost of living was rising, the influx of refugees from the North was increasing, and commercial traffic on the Yangtze was slowly coming to a standstill.

Movements at Shanghai depend on the state of the tide, and there is a curfew on shipping movements over the whole river between sunset and sunrise. This means that the passage from Shanghai to Nanking must be done in two stages. The normal routine is for the relief ship to anchor for the night at Chinkiang and arrive at Nanking by 10 a.m. the following morning. There is then time for an hour's turnover, before the old guard sails down river at a speed of 18 knots, so as to make Kiangyin that night, and then on to Shanghai or to sea, as ordered. It will, therefore, be noted that



the complete process of turning over, from the time of departure of one ship from Shanghai, to the arrival there of the ship relieved from Nanking takes three to four days.

During the passage up the Yangtze, all ships were always in instant readiness to reply to artillery fire, but were only to do so in self-defence. Occasionally an overenthusiastic soldier on either bank would loose off his rifle or automatic weapon by way of salute to passing ships. These ebullitions were usually ignored, and indeed H.M.S. "Amethyst" herself made no reply to some desultory fire from a field gun battery about ten miles below Rose Island early on the fatal morning of 20th April.

The width from bank to bank of the river varies from fifteen miles near the mouth to between 2,500 and 1,400 yards at Rose Island Bend, narrowing to 500 yards in the Nanking Cut-off. The navigable channel is, of course, a good deal smaller, and in point of fact it is almost more difficult to follow in the lowest reaches where the river is broad and shallow. Any ship passing at high speed churns up a good deal of mud, because the average depth is only four to seven fathoms. In the Winter the whole river is very low, so that anywhere above Woosung is hazardous for large vessels from October to April. To assist in piloting two Chinese pilots are carried. They work hour on, hour off, using large-scale charts issued by the Chinese Maritime Customs, covering the river in approximately twenty-mile stretches. These are supposed to be brought up to date and re issued every year.

Almost at the same moment as the "Amethyst" left Shanghai, the Naval Attaché, Nanking, confirmed that it was practically certain that the Communists' crossing of the lower Yangtze would take place on 21st April. This signal was immediately followed by another from the Senior British Naval Officer afloat at Nanking (H.M.S. "Consort"), announcing that he intended to get below the crossing places before D-day. In order to do this it would be necessary for H.M.S. "Consort" to sail at noon, i.e., 2½ hours before H.M.S. "Amethyst" was due at Nanking, on the assumption that the "Amethyst" could only make Kiangyin instead of Chinkiang the first night. The necessity for this brief gap in guardships was explained to and accepted by H.B.M. Ambassador, Nanking.

At Nanking, the weather throughout April had been almost constantly fine, and on 20th April, it had warmed up sufficiently for the local inhabitants to remove the top half-dozen layers of clothing which they normally assume every Autumn. The scene was perfectly peaceful while the final dawn shooting party collected the last snipe from the outskirts of Nanking. The last wild ducks were crossing the Yangtze in the opposite direction to the last refugees, apparently undaunted by gunfire which had been gradually drawing closer for the last ten days. Just before 10 a.m. the illusion of peace was rudely shattered by a signal from the "Amethyst," "Am aground under heavy fire in approximate position Lat. X, Long. Y," then silence. Preparations for sailing the "Consort" and preparing for action were consequently accelerated, but before leaving it was considered advisable to check with H.B.M. Embassy that no declaration of war had in fact been received. All doubts as to what to do were soon resolved by a signal from the Flag Officer Second-incommand, "Proceed to the assistance of H.M.S. 'Amethyst.'"

On receipt of this signal, the "Consort" was able to report that her time of sailing would be II.30 a.m. instead of noon. Since early morning a number of hands had been employed carefully embarking 700 cases of empties. These represented the entire capital (£160) of the ship's welfare fund, but they all had to be jettisoned as

the ship got under way. We proceeded through Nanking Cut-off at 20 knots, increasing to 28 knots when in the main channel. Seven ensigns had been hoisted and three Union Flags were also displayed, so there could be no doubt of the Consort's nationality. She was, however, as fully prepared for action as a ship can be in peace time. We steamed down the Yangtze faster than any ship has ever done before, and our wash would have been somewhat destructive to the numerous craft that ply in normal times, but there was an ominous calm over the entire river.

Suddenly this was broken by some automatic machine-gun fire coming from the North bank as we passed Icheng. Although our guns appeared to be peacefully fore and aft, we were, of course, at action stations, and keeping a very close watch on the North bank. After the ship had been hit by several bullets, we fired one salvo which scored a direct hit on a machine-gun emplacement. All enemy fire immediately ceased.

We were in wireless touch with the Flag Officer, Second-in-Command, and with H.B.M. Ambassador, Nanking, and were giving them "Sitrep" every ten minutes. At 1.45 p.m. we were able to report that the "Amethyst" was in sight. This was earlier than we expected, as her position proved to be further up the river than she had signalled and the "Consort" had apparently made good 29 knots.

As the distance between the two ships narrowed, H.M.S. "Amethyst" signalled "If you are fired on I advise turning back," to which we replied asking whether she was ready to be towed. We were approaching her at 15 knots, when suddenly a shell landed 100 yards on our starboard quarter followed rapidly by another one a little closer. The battery which had damaged the "Amethyst" was obviously coming into action. That invitation was enough for the "Consort" and we opened fire with rapid salvoes at a range of about one mile. We increased speed and swept on past the "Amethyst" and round the Rose Island bend. We knocked out three of the enemy's guns by direct hits, but missed others because of the spread at that very short range. In any case, he was confused by the heavy fire and speed of his target, and the "Consort" escaped any serious damage or casualties. We therefore stopped, turned round and moved slowly back up river, deliberately destroying the guns which could be seen to be still in action on the bank. The "Amethyst" did not look too badly aground, and we signalled to say we would send medical assistance, and were ready to take her in tow.

For a time all seemed to be going well, but when we were again opposite the centre of the battery on the bend, we started getting hit rather frequently. This fire was coming from mobile anti-tank guns, quickly brought up and concealed in hedges and ditches. The wheelhouse was hit, killing the coxswain and putting the forward steering position out of action. However, the torpedo tube's crew were manning the tiller flat, instead of the tubes, so it was an easy matter to telephone the wheel orders direct to them from the bridge, and the ship remained under control.

The navigator was sent to the wheelhouse to see what was the situation there, and as he returned to the bridge his tin hat was abruptly removed from his head. When he picked it up it had a hole straight through the front centre made by a .5 bullet. He reported that the wheel was wrecked, the coxswain killed and the other occupants wounded. At this time the bridge was hit twice by 37 mm. shells, and the Captain slightly wounded, the first Chinese Pilot was knocked out. The second Pilot had to be dragged up from down below, and pinned in position by the navigator's dividers. "A" and "B" guns were put out of action, the trainer in each case

dying later of wounds; others of the crew were wounded. All primary control circuits were cut.

We could see a very large number of junks lying alongside in the creek leading North from Rose Island bend, and it became increasingly clear that this was the "invasion fleet." This meant that the Communist Army, waiting to cross in this area, was closely concentrated in the neighbouring fields and in a strong position to support the original battery with all their fire power. Despite the casualties which they had only too plainly sustained, the enemy still seemed able and willing to produce more and more semi-automatic guns and bring them into action from positions which were not betrayed by their own fire. At the current rate of damage it was apparent, therefore, that H.M.S. "Consort" would be put out of action before the opposition could be silenced. By 3 p.m., it was obvious that we could do nothing more to help the "Amethyst," so reluctantly it was decided to withdraw.

By this time the doctor's hands were full with 25 casualties, so he could not be spared. Even if any boats had still been seaworthy, none could have survived for long in that concentration of fire. The dressing station (Wardroom) was full of wounded, and whilst the medical officer ably continued his grisly work, the Wardroom was hit three times, putting the lights out, re-wounding casualties, and sweeping away surgical instruments. Luckily the doctor was untouched He was energetically assisted by the one Sick Berth Attendant, and the action information team was also of great value in providing stretcher bearers.

Whilst the survivors of "A" and "B" guns went aft to man "Y" gun, "X" gun had a breakdown, and for a few brief unhealthy moments only one 4.5 in. gun was in action. However, the Bofors were still firing, though short of ammunition after the ready use supply had been exhausted.

When "X" gun jammed the gunner's mate got so excited that in his exhortations to the supply party to keep the Bofors in action his upper plate fell out, and he promptly flung it at the supply parties. When the next belt of ammunition ran out, he said that one half was no good without the other, and so hurled the lower half at "those bloody Communists." Supply parties were short handed and were mostly made up of Chinese cooks, stewards and mess boys and the dhoby firm. As the crisis drew on they were discovered to be sending up any projectile they could lay hands on, even starshell. The stokers of the fire and repair parties, when not putting out fires—of which there were several, hurled themselves into shellrooms and magazines in order to send up more ammunition.

In turning at the narrow part of Rose Island Bend the "Consort" was less than half a mile from the "Amethyst" and only a quarter of a mile from the North bank. Opposite us was a scene of desolation, but somewhere a little further inland, anti-tank guns were still keeping up their rapid fire. As soon as we had turned, we increased speed again to minimize the chances of being hit. Before we lost sight of the "Amethyst," we tried to signal "We'll be back in the morning" in order to cheer them up. As all the signal projectors had been put out of action, and two leading signalmen wounded, the signal was made by W/T, and actually received by the "Amethyst" on her emergency set, although she was unable to acknowledge it.

Meanwhile H.M.S. "Consort" was soon under fire again from the battery on Low Island (see map). This battery consisted of seven or eight 75 mm. guns which had already fired a few desultory rounds at the "Amethyst" much earlier in the day. These had been ignored by her owing to their inaccuracy, but they were now obviously on their mettle. At least one of their guns did some very accurate shooting.

and the "Consort" was hit six times in rapid succession. The first shot wrecked the gyro room and had the effect of swinging the ship in towards the nearby bank, but she was soon conned back by telephone order from the bridge, although not before the engines had been ordered astern, and then put ahead again.

Two other hits killed two, and wounded three, of the forward repair party, wrecked the W/T office, and mortally wounded the operator in the middle of an emergency message. The other occupants were either killed or wounded, except a young acting leading telegraphist, who disentangled himself from the mess, and immediately went aft to get the emergency set going.

Another shell wrecked the transmitting station, killing the whole crew of three. The Electrical Officer, who had been in the T.S., went up to report to the bridge, looking like a negro covered with the debris of the explosion. Although alongside the crew, he himself was untouched.

The last shell to hit started a fire amongst the oerlikon ammunition supply line forward, but this was soon dealt with by the remainder of the forward fire party, ably led by the leading stoker-mechanic in charge.

During this time the "Consort" was, of course, replying with all available guns. Of the main armament, the after group of two guns was being controlled by the Gunnery Officer in quarters firing. One at least of the enemy guns sustained a direct hit. At a speed of 28 knots the battle was soon over, but there was another drama to come. Owing to a misunderstood order the wheel in the tiller flat was put the wrong way and the ship turned directly towards the South bank which was only 200 yards away. For a moment it seemed impossible that she could fail to end up as a permanent feature of the landscape. However, for the third and last emergency occasion that day the engines were ordered "Full Astern." This was immediately obeyed and by the time she hit the bank bows on, all 40,000 horse power was drawing the ship astern. She came off the mud at once, was turned round and once more headed down stream. Only her commanding officer knew that she had actually been aground in soft mud.

Not counting the undetected shell which was discovered many days later sitting on top of one of the boilers, the engine and boiler rooms had only one hit, which was very lucky. The engine room staff had a big part to play because both boilers were continuously in use. On no less than three occasions the engines were ordered "full astern together" and for the rest of the day the order most in force was "full ahead together."

By 4.30 p.m., the "Consort" was approaching Kiangyin where several Chinese Nationalist sloops and gun boats were anchored under the protection of a fort on the South bank. After anchoring, one of them signalled, "Have you been caught by the Communist gunfire?" to which we replied, "Yes, but we gave them rather more than we got." Although our ship's company had been severely tested, they were far from downhearted. As some wag remarked, "Might have been worse, it could have been raining"—it had been a perfectly glorious sunny day, almost too warm for the sort of work we had had that afternoon.

Attention had now to be given to the dead (then eight, later ten) and wounded, of whom there were about thirty, the worst lying in and around the Wardroom. That compartment was fairly intact, but the Captain's day cabin next to it was completely riddled with splinters.

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H.M.S. "Black Swan" arrived at 6.20 p.m. and came alongside. Her two medical officers were soon at work, and it was decided to move some of the worst cases over to the "London" for emergency treatment in her sick bay.

The two smaller ships went alongside the "London" when she arrived at 8.30 p.m. and the wounded were hoisted over by her crane, while the commanding officers went into conference with Admiral Madden and his staff. Although the "Consort" could still have gone into action with half her main armament, it was considered essential to get the badly wounded men to hospital, and she was therefore ordered to Shanghai as soon as ready.

While the conference was going on, the "London's" engineers, shipwrights and electrical parties were putting in some very useful work in H.M.S. "Consort." They carried on through the Middle Watch, plugging holes in the ship's side, repairing vital electrical circuits, etc. At 4 a.m. we cast off and sailed for Shanghai. Fortunately it had been possible to repair the echo sounder which was of great assistance in making the 90-mile passage in four hours, through the early morning fog. No Shanghai pilot appeared at Woosung, so we went on and eventually made fast alongside Shanghai Dockyard, still steering from the tiller flat.

The American Navy gave us a very helpful reception, carrying stretchers to waiting ambulances. The repairs essential to make the ship fit for sea took two days. After the funeral, some of the wounded were re-collected out of hospital and the ship sailed for Hong Kong.

The 800-mile passage was carried out with no radar and only magnetic steering. Rather to our surprise we received a very heartening welcome as we steamed into that picturesque harbour. All ships present flew the signal "Manoeuvre well executed" and cleared lower deck to cheer ship. The damage was surveyed the next day and 56 shell holes counted. It was decided to carry out temporary repairs and that the ship should then go to Singapore. After another two weeks in dock there, the "Consort" was able to carry out the Malayan patrol, though some of the more complicated control apparatus was out of action. In due course we went in for a sixmonths' refit, including trials. This was completed on 15th December, when the ship was fully operational again.

Peking radio announced on 22nd April, that the Communist Army had sustained 252 casualties in the fighting at Rose Island. This was some consolation for the losses our own shipmates and our friends in the "Amethyst" had suffered by these unprovoked and unwarrantable attacks.

### THE AMERICAN ATTITUDE TOWARDS INTERNATIONAL AFFAIRS

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By Professor D. W. Brogan, M.A., LL.D.

On Wednesday, 23rd November, 1949, at 3 p.m.

THE HON. LEWIS W. DOUGLAS, American Ambassador, in the Chair

THE CHAIRMAN: I suppose that in no similar period of historic time have there been shifts in the centre of international political gravity and re-directions of national attitudes towards international affairs, breaches in the social, political and economic traditions, comparable in size, sweep or intensity with those of the last third of a century and particularly with those of the last decade. Amidst this complex of change, nothing is silhouetted in sharper contrast with the past than the attitude of America towards international affairs.

That is the subject of Professor Brogan's lecture this afternoon. Considering his varied experience in America, his knowledge of America, where he was able, I should interpolate, successfully to resist the corrupting influences of a great American University, combined with his distinction as a scholar recognized throughout the World, I venture to forecast a lecture as interesting as it will be illuminating.

#### LECTURE

If I had known Mr. Douglas was going to preside, I would not have come to address you, above all, on this subject, but since he is here I shall ignore him and talk about what I think to be the American attitude to international affairs. I have been around a great deal in England and even in Scotland—my native Country, in Holland, France, Belgium and Germany, during the last year, and I think there is an immense misunderstanding about the American attitude which, although here I am speaking to the converted, ought to be insisted on.

That misunderstanding begins first in the belief that American policy is directed by extremely astute, Machiavellian, greedy people. I wish it were. It is, in fact, directed by sincere, honest, well-meaning people—and the two things are not incompatible. The picture of American policy being directed from Wall Street or other places of the same type is false. American policy at the moment is suffering, if anything, from too much goodwill. I should like to see it (I am assuming that the Ambassador is not present) directed with more "hardboiledness" towards our problems than is being shown at the moment. If it were, in fact, directed by extremely hardboiled, astute, profit-making people, it would not have taken the form of the Marshall Plan or the present lines on which the Administration is carrying on. The assumption that all American policy is directed by selfish Wall Street interests, by extremely smart, foreseeing people who are in it for something, I consider to be totally untrue. Rightly or wrongly, wisely or unwisely, it is directed by people who have, as the Quakers say, a "concern."

The Ambassador has mentioned the change in the American attitude in recent times. I first went to America before Mr. Douglas was in Congress—but not much before—and I can say that the change which has taken place there in the last twenty-five years is really fantastic. In President Coolidge's time it was impossible to carry on conversations in America as if the United States had any international responsibilities, duties or even interests. To-day there is far more serious thought there about the duties of the United States than there is about our duties even in our own Country now. That was not true even ten years ago. But it is true now.

I spent six months in America, last year, and everywhere among the younger generation I found an immense concern and an immense sense of duty to the external World. Part of it, of course, quite rightly arose from a rational recognition that in this World the atom bomb and the guided missile exist. It was to the interest of the American people to think about that. But also—and more important, I think—was the conversion of the American younger generation from the not very attractive isolationism of 1925, to an acceptance of the fact that the United States now is the great World Power, the civilization on which responsibility falls; and the acceptance of the fact, reluctantly but generally, that now everything that the United States does is news. It is more than news; it is, in fact, a policy for the rest of the World.

I have always been pro-American, but I was a little surprised—if the Ambassador will permit me to say so—at the way in which the American population has grown up in the last five or six years. I think the American elector, the American Congressman, the American Senator, has now accepted, in the mass, the responsibility which comes from the United States being the most important Power in the World. Five or six years ago I should not have been sure, although I would have hoped, that they would accept it; but they are accepting it now.

I begin by pointing out that the Truman Administration—possibly any American Administration—is in fact taking great political risks by the Marshall Plan, by its views about tariffs, by its attitude to European unity. All these things are political risks. Four or five years ago they would not have been risks at all—they would have been certainly disastrous to the Administration. I give credit to the Administration for taking the risks, but they are not such risks now as they were, because the American people quite suddenly—in the American way—have woken up to the fact that they are the leaders of the free World, and they have in the last five or six years, I will not say to my surprise but to my gratification, quite suddenly taken the responsibility. That is the first thing I want to say.

I was in the United States when the Japanese War ended. Unless you were in America at that time, you could not realize that for most American families the real war was the Pacific War. Yet when I lunched with the editor of the New York Times the day after the atomic bomb was dropped, he and I were the only people there who approved of it having been done, although nearly all of them had sons or grandsons in the Army whose lives were perhaps saved by it. I was never more impressed by the high moral content of American discussion than I was by that meeting. Although the atomic bomb probably saved tens of thousands of American lives, at the moment it happened Americans were worried by their conscience. Was it the right way to win the War?

So I say that the Americans do not suffer from a business attitude, but they do suffer a little from a moralistic attitude. Far from thinking that the only thing that matters throughout is what is in it for them, they are inclined to approach external problems from too moralistic a point of view—is it right or wrong? If a choice has to be made, I should say that it is right to choose to have a moralistic attitude, but what I want to say, although it may be a paradox, is that of all the ruling peoples of the World, the Americans suffer more than others from conscientious scruples and less from the attitude of what is in it for themselves.

Secondly, with regard to their attitude to the external World; if a person lives in the Middle West of America, it demands an immense effort of emotional comprehension for him to understand what is happening outside. If you are in Southern Ohio, Indiana or Kansas, how do you make these people, in their small, economically

advanced, highly prosperous society, conscious of what is happening in Palestine, Indo-China, Java, Colombia or Siberia? If you make an argument mainly on the level of what is in it for them, you get nowhere. There is nothing in it for them. In a small town in Southern Ohio, none of these problems affects them in any concrete way, now that "the boys are back from the Army." But if you talk to them and say, "Your duty is to remember that what you do or don't do is going to be reflected in Java, Madagascar or Colombia," then they respond at once.

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There is no point in going to any of these places in the Middle West and talking to them from the point of view of their interest, because in the short run they have no interest in these places. If you talk to their conscience and say, "You are the most powerful people in the World, and people are dying and being bombed in Java, Saigon and other places," they react at once. That means that the policy of the Administration is bound to be profoundly affected by American sentiment.

Take the simple example of the Chinese question. We have far more interests in China than the Americans have. Economically speaking, the whole of the American interests in China could be wiped out overnight: they amount to only two or three days of the New York City budget. Why are they interested in China? According to any good statistical account, Japan has always been a far more important business area to them than China is; but what has made Americans interested in China is the fact that so many people subscribe in churches to missionary activities there.

What are the consequences of this outlook for our own future? It means that we must, in any policy that we put up to the Americans, do two things to satisfy them. We must, and we should, show a rational, solvent accountancy in our policy. It must be realized that they are tempted by a vast number of approaches of that kind—by what would happen if they put money in India, Ceylon, South Africa, North Africa, and so on. If they are asked to choose from a great many possibilities of doing good, or of valuable investment, they will choose that which will do good to the United States and to the Countries concerned.

What should we put up? What we should put up is, in fact, an appeal—a legitimate appeal, to the American moral sense. It is more important to preserve in Europe the kind of life that the United States grew out of, than it is to raise the level of living in India or Madagascar or South Africa; that is to say, we have, as Europeans, a special claim on American policy: this is where they came from, not merely physically (in fact, most Americans did come from Western Europe), but that, emotionally, the kind of life that the Americans lead comes from the kind of life that we lead. If we fail to lead it, the whole of American life would be compressed and reduced to mere mechanics instead of being the free, spiritual life that they have now.

We should approach the Americans on two lines. First of all, we must present—it is good for us as well as for them—good book-keeping accounts and show that there will be some tangible cash dividend. I should like to remind you that I grew up in a Country which invented double-entry book-keeping! But also, when you are putting to the United States any such policy, you must allow for the fact of their profound moral concern about the external World. It is not enough to put up to them something in which there is a profit; it must also be the kind of profit which, having at the moment the choice of all kinds of profits, they want to have. What they want to have is the preservation in Europe of the American way of life—which, of course, is the Western way.

Let me come down to some concrete views. There is a danger—I think quite a serious danger—that in Britain we shall miss the boat, for reasons which in a way are a credit to us. In the XVHIth and XIXth Centuries, for example, we kept on opposing, for good reasons, the political unification of Europe. We were against it being unified by Louis XIV, by Napoleon I, by William II. We succeeded in preventing the imposition upon Europe of that kind of unification. But at the same time as we were doing that, we did in fact encourage another and more important form of unification. We were the great Free Trade area, we provided the Bank of England, sterling, insurance—the whole City of London atmosphere. At the same time as we opposed successfully the unification of Europe on the political level, we did encourage it on the economic level.

There is a danger now—I think a very serious danger—that we shall continue to oppose, as we have done in the past, the political unification of Europe and not remember that the converse was that, while we were opposing the political unification, we were promoting economic unification. We cannot go on living—let us be candid about it—on the memory of the Duke of Wellington and forget that Sir Robert Peel and Mr. Gladstone provided a very good substitute for political unification.

To turn back again to the American attitude: I think that many American views of Europe are simple-minded. If you live in America and see that the three million square miles of America are unified, you cannot help thinking how much money, time and labour would be saved if Europe, which is smaller, did the same thing. You could fly from London to, say, Warsaw without getting down. Why is it that you have to go through passport controls, and so on? As long as the American attitude to Europe is put that way, I think it is an excellent thing to ask every European statesman, "Why is it that when you go to Switzerland, for instance, you must do so-and-so?" So far, so good.

On the other hand, it is quite true that Americans tend to forget that their own unity was not bought at no cost. The present unification of the United States was created after the greatest civil war in history—the war between States, with half a million people killed and immense losses suffered. Therefore, it is wrong to assume that Europe, which has had two Great Wars, can afford the cost of another war to unify itself.

Another quite reasonable suggestion is that in Europe, although most of these national barriers are merely vested interests, some are quite serious emotional barriers which must be respected. It is very difficult indeed—in fact, it is impossible—if you go to the Netherlands, for example, to tell the Dutch simply how important it is to restore German industry. They have had German industry on them and in them. When an American arrives briskly from Minneapolis and tells the Dutch how stupid they are, that of course Rotterdam is their great port but most of the business of Rotterdam is done from the Ruhr, he tends to forget that the last "business" Rotterdam had from the Ruhr was the destruction of Rotterdam. Central Rotterdam does not exist any longer, because the Ruhr came there in the form of bombs. If I were talking in Washington, I would make a point of that.

Another side is that Americans do bring into European controversies simpleminded American solutions. A great friend of mine was very puzzled in Germany to find that in Bavaria they still had Church schools. He thought it outrageous, absurd and preposterous. It was very hard to explain it on rational utilitarian lines.

Nevertheless, I think we ought to accept and welcome the fact that the American people, although they sometimes send over emissaries or ambassadors who do not

know that you must not talk in Rotterdam and Bavaria in those terms, have risen very much to the height of the great argument. All American politics at the moment are in favour of people who want to impose on the American taxpayer—the American man in the street, immense responsibilities.

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Mr. Douglas will remember how he tried to get the budget trimmed not many years ago. Now the American people are accepting a budget on a far greater scale. They are accepting it because they realize that they have the responsibility of being the rulers of the World, and they are training themselves for it. Every election, every controversy, in America ends up with the younger American people insisting, "We must accept our role in the World, we must be prepared not merely to advise but to help, and not merely to help but to share in the work."

It is not accidental that one of the great political victories last November was by Paul Douglas, who combines the very rare triple qualifications of being a professor of economics, a Quaker, and a Colonel of Marines. The way in which Douglas won in Illinois—in that great isolationist State, was a real contribution to the American role in the outside World. They elected him not only because he was a Quaker, a professor, and a Colonel of Marines, but because they knew that in people like him the new American role was being accepted—and that role is expensive in every sense of the term.

The tax burden is very heavy, but the United States at the moment is prepared, to a degree which I do not think we appreciate enough, to accept the painful, expensive and irritating role of being leader of our free World. I hope that in all our discussions and with all the natural qualms that we have, we shall recognize the generosity with which the American people as voters are contributing at the moment to our problems. I say I hope that; I am not sure that we shall do so, but I am sure that we should do so, because every time any of these problems come up in America it means the draft, it means taxation, it means imposing on Wisconsin and Kansas—which have not seen an enemy since the last Indians left—the imaginative and emotional necessity of thinking of these problems in the sense of what they mean in Paris, London, Brussels or Rotterdam. They are making quite serious sacrifices because, although they do not feel what we have gone through, they do know that their duty is to replace our wasted wealth, our lost wealth; and they are doing it by providing their own wealth.

The last thing to tell them is that they made money out of the War—they did not—or that they are very lucky to be in their present situation. If they were shortsighted, as they might be, they would be much luckier now; but in the years since 1945, at any time the American people have been asked to make a serious judgment on whether they should have a nice time now, with great risks, or whether they should make sacrifices for peace, they have always chosen the harder course.

I think the fact that they have done so is one of the great sources of comfort, because all the temptations were the other way. If a great democratic people can choose as the Americans have chosen, again and again, the harder way, it restores faith in the basic democratic premise that people can, in fact, if given a free chance, choose something beyond their noses. The Americans have done it. They are doing it still.

We ought to notice more what they are doing, and above all we ought to remember that the imaginative effort of the American people to understand the problems of other people is a test for them which they have met. They have a lot to learn, but since 1945 they have learned it every year, and they are now accepting

reluctantly—who would not be reflectant—but freely, their responsibilities as the leaders of the English-speaking peoples, and they are ready to show, and are showing that, however painful it may be, they will take that responsibility.

All we can do now is to notice the fact, to share our problems together, to forget to tell ourselves again what we did in 1940, and to remember what we have got to do in 1950, which is to share the same burdens with the Americans. They have much more power, but we have more power than we pretend to think we have; and I would rather see us over-stretching ourselves and taking more responsibilities than we have at the moment. I do not like our saying, "It is all over now, let us pass the burden to other people." I would rather that we shared it and not, like elderly uncles, say that we have retired. I am sure we could contribute a great deal to the American solution for the World, and we must do so, because if we leave the Americans to themselves they will do extremely well, but they will lack a little in tact, and finally Europe will say, "Of course, all this American dictation is all right, but. . . ." If we share the burdens we shall not have to take the whole responsibility for American policy. We shall not have a bad conscience at having suddenly thrown up the sponge and said, "We are too old, too poor, to do what we have done in the past." Let us now give Europe a lead in the way of freedom and civilization, and also interpret the United States to Europe, which was done successfully in the past and I think we can often do it better, if I may say so, than the Americans do for themselves.

#### DISCUSSION

Brigadier K. B. V. Crawford: May I ask Professor Brogan whether he has read a book called *The Awakening* by Mr. Amery, and what his opinion of that book is? The subject of the lecture is so closely affected by Mr. Amery's theme—whether it is true or otherwise—that one can hardly go away this afternoon with a feeling of satisfaction unless one knows the Lecturer's opinion.

THE LECTURER: Part of Mr. Amery's book I agree with and part I do not. I think it is an optimistic fiction to believe that we have a real choice. We have none. I do not think that Mr. Amery thinks we have a real choice. The lead in the Western World is now in the hands of the United States, and I think it is a waste of time to ignore that that is the fact.

For example, though Mr. Amery does not argue that point, some of his disciples argue that Canada should leave the dollar area. It is quite absurd to think that Canada can be asked to leave the dollar area. Canada is a North-American Power—the best governed in the World, and a very rich Country. But one cannot ignore the fact that, economically, Canada is the northern part of the United States.

In Mr. Amery's argument and in all others of that type, there is a tendency to ignore the fact that the leadership of the English-speaking World has passed (a) to the United States, and (b) to Canada. These two things are related. There is no possibility of a free economic policy which ignores the basic needs of the United States and of Canada.

I think that in Mr. Amery's book there is a survival of the XIXth Century idea, according to which it was possible to believe that we could have a World in which the United States was a useful exterior body and in which the British Empire, as such, was a possible economic unit. I do not believe that is so any longer. Rightly or wrongly, it is a fact that the leadership in our World is in the hands, first, of the United States and secondly, of Canada; and we cannot separate the two Countries. I think that Mr. Amery is still a little of the romantic. Possibly in 1910 or 1920 one could conceive a World in which these things were not so; but now we have to accept the fact.

What we can do is to notice the kind of American leadership and to notice hopefully the way in which the American electorate has risen in the last five or six years to its responsibility. But all arguments based on the idea that we can ignore the Americans seem to me to be nonsense, including (this is not quite Mr. Amery's argument) the belief that, somehow or other, you can create a unity other than the unity between the United Kingdom and the United States. There is no such possibility of choice.

BRIGADIER G. F. H. ALMS: May I ask Professor Brogan when he thinks it is likely that the United States Congress will deal with their protective laws—their tariff and navigation laws?

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THE LECTURER: This is one of the questions I would like to pass to the Chairman. As a Congressman, if memory serves me rightly, he did a lot, unavailingly, to try to answer that question.

To take first things first—the tariff laws: I think that surreptitiously, since the days when Mr. Douglas was Director of the Budget, a great deal has been done to cut down American tariffs and more is being done, and the less we say about it, the better. That is to say, things have been done quietly.

The navigation laws are, of course, another matter. They affect me a great deal, because I was born on the Clyde, and feel any ships that are not built on the Clyde ought to sink! It is a fact that Congress, against the advice of the Administration, did import into the Marshall Plan a rule that 50 per cent. of the Marshall Plan exports should be carried in American bottoms. That was very much against Mr. Truman's opinion and against Mr. Marshall's opinion. Everything has been done to get round this kind of regulation.

The average Congressman does not realize that if he lays down that cargoes shall be carried in American bottoms, he is merely imposing a charge on the American taxpayers, because we can import in our ships all our own needs, and so can the Greeks and other Countries. The average Congressman is not given to deep economic reasoning, and he does not realize that when he votes that these things shall be carried in American bottoms, he is merely saying that the American taxpayers must give 50 million dollars extra on the Marshall Plan to pay Britain, Greece and Norway for not being able to import in their own ships. That would not matter if there were no danger of cutting Marshall aid. As long as the Marshall Plan is voted in a big way, that is just a thing for the taxpayers in Kansas to notice that they have to pay more because the shipping lobby put this thing in; but if there were a cut in the Marshall Plan, and the total aid voted was reduced, but the provision that Europe must import American goods in American ships stayed, it would be, shall we say, distressing. But let us hope that any cuts made will be cuts in the direction of not imposing this provision, which the Administration always opposed.

The Chairman: I am very glad to gather from what you have just said, Professor Brogan, that there are occasions when you are not sorry I am here, even though on other occasions you regret my presence! Are there any further questions?

MAJOR P. H. FLOWER: May I ask the Lecturer whether British State expenditure strikes, shall we say, the Middle Western Americans as extravagant or excessive, as yet?

The Lecturer: The first answer is "Yes," and having said that, I will go on to say that some of the American criticism of our expenditure is legitimate, I think. It does strike the average American that we are spending too much money on governmental activities of all kinds. But again, if you consider the fact—I believe it to be a fact—that there are hardly any Socialists in America, the way in which the American public has allowed its money to be, from their point of view, wasted, is very remarkable.

They do not believe that a government spends money as well, roughly speaking, as private people do. Yet I do not think that any serious case for cutting down Marshall Aid, for example, has ever really been argued—I do not say that anything has not been said—on the line that if they give it to the English, they will spend it on social activities. They have given it without strings.

May I add that I think one reason for that is not totally gratifying? Almost all Americans, even Left Wing Americans, believe that governmental activity is wasteful. Consequently, they think it is very likely that the money they give us will be wasted, but they also think that if they give it to British business it will also be wasted.

CAPTAIN E. ALTHAM, R.N.: The Lecturer has left with us a very strong impression of the psychological and economic links growing year by year between Canada and the United States. I wonder if he would care to remark upon how Australia and New Zealand fit into that picture?

THE LECTURER: I think there is a great difference. First of all, Canada is a part of North America, not only geographically but also as regards the distribution of water power, the great oilfields of Alberta, and so on: no amount of rhetoric can refute that.

Australia and New Zealand are pretty remote. Canada is not far from the United States. The North-American complex is a reality of life which Canadians must accept. It would probably be quite impossible, for example, to put on in New York a successful musical comedy about Canada; the great success at the moment is "South Pacific."

I think it is a mistake on our part to confuse Canada with the rest of the Commonwealth. Canada is a part of the Commonwealth, but it is farther from us than it is from the Americans; whereas Australia and New Zealand are far more remote to the Americans than England is. When the Americans go to Australia, it is of interest to them because the Australians speak the same language and have the same general line of attitude; nevertheless it is a foreign Country to them.

From our point of view, we tend to regard Canada, Australia and New Zealand as part of the Commonwealth on the same level. I do not think that any American for a moment thinks of Canada as a foreign country and, therefore, when he thinks of Australia or New Zealand, he thinks of something that is not like Canada.

SUB-LIEUTENANT R. K. CHOPPA, R.I.N.: May I ask what would be the attitude of the average American towards a foreign policy which encouraged foreign investments?

THE LECTURER: I should like to be able to answer that question by saying "very favourable," because foreign investments are what the World needs. The trouble is that the average American businessman gets far more profit out of the United States and Canada than anywhere else, and the average American taxpayer—I think wrongly, but humanly—would rather give the money away than get involved in all sorts of complicated problems, such as whether they are "exploiting," and what not.

What the World needs is a revival on the American side of the old British habit of lending money for profit. The trouble is that the Americans cannot see the profit. If I could see (I know that this is an unpopular view) American businessmen rushing round the World insisting on investing money, I should be much happier than I am.

A great friend of mine said, "I am continually asked about American investments in France, and I keep on saying, 'Produce a concrete example of Americans wishing to invest in France and then we will tell you whether we approve of it or not.' I have said that for three years, and there is one example—a Coca Cola plant in Alsace."

I should be delighted to learn that American companies—Standard Oil, Du Pont, and so on, were rushing people round the World to look for profit. But they are not.

#### THE CHAIRMAN

I am sorely tempted to plunge into a number of the subjects which have been discussed so very interestingly here, but I feel that in this particular instance discretion would be the better part of valour and, more than that, it would not impose such a heavy burden on your time.

But I should like to reinforce what Professor Brogan has said in regard to the first point that he made. He said that in travelling around Europe, and even in parts of England, he had encountered the view, broadly and widely held, that American foreign policy, whether expressed in terms of commercial policy or political policy, was dictated by a group of scheming men who were seeking commercial, financial and economic advantage in various parts of the World. In some strange sort of subtle way, I presume that view is not unrelated to the economic determinism which has laid hold of so many people's minds.

Professor Brogan, I think very properly, has disillusioned people of that view. I can assure you that if there is any scheming on the part of these centres of wicked commercial gain—if that is what they are, although I am not at all clear in my own mind that that is the proper way to designate them—it would be expressed, not in terms of the sort of foreign policy which the United States is now pursuing, but in terms of a wholly different one. Many of the members of those communities would be far more disposed, as Professor Brogan has implied, if not explicitly stated, to concentrate their efforts on the profits which they know they can make within their own Country than to seek speculative and illusory profits which they might possibly make in some distant land.

American foreign policy, I believe, springs from a rather sudden comprehension on the part of the American people that the United States is a part of a world community, and that it cannot survive unless it recognizes that fundamental historic change in its political position. What de Tocqueville said of the United States more than a hundred years ago is now no longer true. It cannot recline quietly, silently and tranquilly in continental isolationism. That period the American people, I believe, recognize has come to an end, and it is that recognition which moves them to adopt in what at times must, I am sure, appear to be a blundering fashion, the present policy towards the World, which is fundamentally a policy of accepting a responsibility.

I do not mean to infer—and I think Professor Brogan perhaps was not quite correct when he said—that leadership has passed to the United States. In a certain sense that is true, but if it were to be inferred from that conclusion that other parts of the World are no longer particularly necessary to the preservation of what we call Western civilization, if that were to be inferred, then I would take issue with Professor Brogan—and I am sure he would not go that far. But it is a distinction which I think perhaps it might be well to emphasize. Do you concur in that, Professor Brogan?

PROFESSOR BROGAN: Yes, I have said so.

THE CHAIRMAN: Then I did not understand you. May I put this way, that while power has migrated—just as power throughout the history of man has always migrated from one centre to another—in this particular case westwards, it is very doubtful whether the Western World can survive unless there remains a Western World consisting of the United Kingdom and the Western part of Europe, and those other far-flung parts of the Universe that are associated intimately with the Western World. When we talk of Western civilization, we do not talk of something which is indigenous to the North-American Continent above the Rio Grande and the western part of Europe. We talk of a whole body of philosophic, political and moral conceptions that are indigenous to people who live in the North-American Continent, in the western part of Europe, in Australia, New Zealand, South-Eastern Asia—in all those outlying parts that are intimately associated historically and traditionally with this great cultural centre.

To assume, merely because power has migrated, or rather the centre of power has shifted, that this great community can be preserved without the acceptance of responsibilities and duties by its integral members is, I believe, a fallacy. For we are all a part of this community, and each one of us has responsibilities to discharge and duties to bear.

Well, Professor Brogan, I am sorry if my presence here was an embarrassment to you. I regret that the running on of time, combined with other considerations, interferes with my joining in the discussion of certain of the subjects that have been discussed, such as tariffs, shipping policy and other matters of a similar nature.

I know that I can express for you, Ladies and Gentlemen, as I do express for you, the appreciation which we all feel for Professor Brogan and for the way in which he has,

I think so lucidly, explained the changing attitude of the United States towards international affairs and for the way in which he has so clearly answered the questions that have been put to him. (Applause.)

THE LECTURER: I should like to conclude by thanking you, Ladies and Gentlemen, for listening to me and to make two points arising out of what the Ambassador has said. First of all, I think we are at the moment in Britain defeatist, and we should not be. We ought to have a positive policy of our own, which I think would run with American policy. We are abdicating too much. I think that is wrong. But my subject was America. If I were asked to say what the British attitude should be, I would say, "Be much more on our toes and aggressive than we are."

Secondly, and I think the Ambassador may not agree, I should be delighted to see evidences of American economic imperialism. I should be delighted to see American "drummers" all over the place trying to make money, because I am an old-fashioned man and I believe it is right to make money. If I could see greedy Americans coming over here to make money, I should be much more cheerful than I am at the moment.

MARSHAL OF THE ROYAL AIR FORCE LORD NEWALL: I know that all of you appreciate how extremely fortunate we have been this afternoon to have His Excellency occupying the Chair with such ability and charm. We have benefited from hearing his views on this most important and interesting subject and on some of the things that Professor Brogan said.

Your Excellency, on behalf of the Council of this Institution and of its Members, we thank you most sincerely for giving up your time and taking the Chair this afternoon at our lecture. (*Prolonged applause*.)

#### AN INDIAN OCEAN PACT

By COMMANDER H. E. FELSER PAINE, R.N. (late Captain, Royal Indian Navy)

URING recent months both India and Pakistan have been steadily building up their Navies. India now possesses a cruiser—I.N.S. "Delhi" (late H.M.S. "Achilles"), and is adding several destroyers to her fleet. Pakistan is also acquiring destroyers. This is an excellent sign that the two Countries are alive to the necessity for naval defence, and to the fact that, throughout the ages, the sea has been, and still is, of the greatest importance to the Indian continent.

#### SEA POWER AND THE INDIAN CONTINENT

If we look back through history, we find plenty of evidence to show that well over a thousand years before Vasco da Gama arrived at Calicut a regular trade was being carried on between the Red Sea and parts of the West Coast of India. Later we have accounts of large Chinese junks trading with Malabar ports. By the time the Portuguese had arrived the visits of these junks had stopped and practically the whole of the sea trade in the Indian Ocean was in the hands of Indian and Arab seamen. It did not take the latter long to realize that the new arrivals might become a dangerous threat to their trade monopoly, and they fought bravely to preserve their rights.

At first the Indian fleets put up some excellent fights against the newcomers, and on at least one occasion inflicted a severe defeat on their Portuguese adversaries. The latter, however, chiefly owing to their superior armaments and at times owing to the bickering between rival Eastern commanders, gradually overcame this opposition and, having established bases at such places as Socotra, Ormuz, Goa and Malacca, were in a position to control the whole of the trade to and from India.

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The Portuguese were followed by the British and Dutch, and later the French. When the newcomers first arrived the Portuguese had the great advantage of being in possession of all the best bases, but they gradually lost these through failing to keep sufficient ships to maintain their sea communications. One by one their ports were isolated and captured, and Goa, although still remaining in Portuguese hands, was blockaded and cut off from the outer World. Portuguese power in the East was lost through failure to maintain their Navy at an efficient strength.

Although the XVIIth Century was one of bitter struggle between the English, Portuguese and Dutch, it must not be thought that during this time eastern ships and sailors had faded completely out of the picture. It is true that when most of the legitimate trade in the Indian Ocean had been taken over by the Europeans, the local sailors found piracy a more paying concern. They took full advantage of the confused situation, and powerful Muscat, Mahratta and Kutch fleets were a constant menace to all ships passing their squadrons. In spite of this, a certain amount of peaceful trade was still carried out by Indian ships and, in 1698, we find East India Company ships convoying the Mogul's pilgrim ships across the Arabian Sea.

The pirates of those days did not limit their depredations to individual ships. In 1698, a Muscat fleet descended on the Portuguese possessions in East Africa, captured Mombasa and other ports together with several hundred miles of coast: possessions which were destined to belong to Muscat for over 150 years. Bombay was threatened by both Mogul and Mahratta fleets. European pirates were also active and among them we find such names as Kidd, Avory, Chivers, Babington and Bowen.

The XVIIIth Century was chiefly occupied with the struggles between the English and French. Shortly after the Peace of Utrecht, the French acquired the island of Mauritius which, lying midway between Cape Town and Colombo, was of immense strategical value. Soon after this, the War of the Austrian Succession broke out, followed by the Seven Years War. During the latter war, the English fleet had an efficient base at Bombay which was quite capable of building a 74-gun ship on its own. Mauritius had been neglected by the French, and after three engagements with the British fleet, D'Ache, the French commander, was forced to return to France for repairs, leaving the English fleet again in command of the Indian Ocean. Mahan, in his remarks on this war, says: "The one nation that gained in this was that which used the sea in peace to earn its wealth and ruled it in war by the extent of its Navy, by the number of subjects who lived on the sea or by the sea, and by its numerous bases of operations scattered over the globe. Yet it must be observed that these bases themselves would have lost their value if their communications remained obstructed . . ." I do not think that this remark applies any less to-day.

In 1778, war once again broke out between France and England. The English ships were under the command of Sir Edward Hughes, a seaman who appears to have been possessed of more than average ability but who was probably getting a little worn towards the end of the campaign. The French Squadrons were commanded by Suffren, who was a first-class tactician with an unlimited driving power and an extraordinary ability to appreciate any situation that might arise. All the fighting took place off the Coromandel coast between Madras and Trincomalee. This campaign is especially interesting as it shows the importance of the latter place as a base. It was at first held by Hughes, but was later occupied by Suffren and, being the only sheltered harbour on this coast, played an extremely important part in this campaign. Secondly, this last struggle between the French and English in these waters was an excellent example of co-ordination between the Army and Navy. The Army was almost completely dependent upon the Navy for supplies and reinforcements, while the Navy was largely dependent upon the Army for the protection of their bases. Air power—now a necessity to both Army and Navy, has not relieved the two latter Services' dependence on one another in a campaign of this type.

Before moving on to modern days it might be worth while to look back at the lessons learned from the last two thousand years of sea warfare in these waters. These can be classified under four main headings:—

- (1) The need for adequate bases strongly defended and stored.
- (2) The necessity for the retention of sufficient sea forces to maintain communications between those bases.
- (3) The value of a well-equipped and well-trained striking force to take action the moment war is declared.
  - (4) The importance of complete co-operation between the Services.

During the 1914-18 War the Indian Ocean was only slightly affected. The cruises of the German raiders "Emden" and "Wolf" were merely brief episodes which, although they caused a considerable upheaval at the time, did not have any lasting results.

#### THE JAPANESE MENACE

The recent war however was a much more serious affair. India was threatened from both the West and East: from the West when Italy entered the War, and from the East when Japan attacked. The Italian fleet never became very dangerous, though their submarines might have seriously interfered with and damaged shipping in the Arabian Sea, including the important oil traffic from the Persian Gulf.

The Japanese attack, however, was a very different matter. Indian Ocean strategy had been based on the supposition that Singapore would be held. After its surrender on 15th February, 1942, events moved with almost bewildering swiftness. Palembang in Sumatra was occupied by Japanese troops the following day. Less than a month later Rangoon was evacuated and, by the end of March, the Andaman and Nicobar Islands had been occupied. The Japanese were now in possession of practically the whole of the eastern sea-board of the Bay of Bengal, Akyab and Chittagong alone still remaining in our hands.

Early in April the Japanese Fleet entered the Bay of Bengal, carrier-borne aircraft attacked Colombo and Trincomalee and sank the carrier "Hermes" and the cruisers "Dorsetshire" and "Cornwall." Our East India Fleet, under the command of Admiral Somerville, was composed largely of obsolescent ships and we were woefully short of aircraft. It was obvious under these circumstances that Trincomalee—our only remaining base in the Bay of Bengal, might well prove a death trap. As a result the Allied Fleet was forced to seek bases in the Arabian Sea. One might almost imagine Sir Edward Hughes and Suffren nodding their heads and sympathizing with Admiral Somerville's difficulties.

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As it happened, the Japanese failed to take full advantage of their earlier successes. After this one sally into the Bay of Bengal their fleet retired to Singapore and never again ventured to enter the Indian Ocean in strength. This failure to follow up the initial success in these waters was probably due to their general strategy. Their pattern of advance had been an eccentric one which had given them the advantage of interior lines of communication. There were, however, disadvantages to this form of strategy, which had caused considerable dispersal of their fleets and had prevented them from concentrating their efforts in any one direction. As we know, while one fleet was operating in the Indian Ocean a second was engaged in the advance towards Australia. Early in May, two days after we had landed a force in Madagascar, this second fleet sustained its first defeat in the battle of the Coral Sea. A month later a third Japanese fleet was heavily defeated at Midway Island. As a result of these events the threat to India definitely receded.

For a moment, however, let us go back to April, 1942. From the Axis point of view the answer would have surely been for the Japanese to have concentrated their forces and made an all out attack on India in an attempt to join up with her Western partners; had she done so, there is little doubt that the Allies would have been in a very sticky position and that the fate of India would have hung in the balance.

Later, had Japan pushed her submarine campaign with the same relentlessness that the Germans used, shipping in the Bay of Bengal and the Arabian Sea might have been brought to a standstill. All of this would have been the result of insufficient sea power on the part of the Allies.

#### FUTURE SECURITY

What is the position to-day? An attacking Power will strike quickly, probably more quickly than Japan did in 1942. The Indian Ocean is bordered, especially on

its eastern side, by small Countries, many of them in a state of political uncertainty. These include Burma, Siam, Malaya and Indonesia. To the northward there are Iran and Iraq; further West the Arabian States and Egypt. Finally there is East and South Africa. None of these Countries is capable of dealing with a powerful aggressor on their own. All of them are, to a greater or lesser extent, dependent on sea communications, and the majority of them possess excellent potential bases.

It would seem that the only answer for the preservation of the security of these Countries would be the formation of an "Indian Ocean Pact." India, Pakistan and Ceylon are the Countries primarily concerned—they would form the core. It is essential, therefore, that these three Countries should work together in matters of external defence. The other major party in the formation of this pact would be Great Britain. What forces are available to put teeth into such a Pact?

During the years preceding 1939, the Royal Indian Navy had a hard struggle. at times even for existence. Thanks, however, to the untiring endeavour of senior officers, especially those loaned by the Royal Navy, there was in 1939 the hard core on which a Service of sufficient strength to play its proper part in the struggle for freedom could be built. Even then the core was woefully small and consisted of some half a dozen little ships and about 1,200 officers and men. By the end of the War against Japan, the Service had expanded to a force of some two hundred ships and over thirty thousand officers and men. Ships of the Royal Indian Navy had served in the Atlantic, the Mediterranean, and throughout the Eastern Seas. At the time of the Japanese surrender many of the senior Indian officers were in command of ships at sea and others were holding important staff jobs ashore. It looked as if the Royal Indian Navy was well on the way to becoming a force able to take a major share in the defence of the Indian Ocean. Then came the granting of Dominion status and the division of the Navy between India and Pakistan. This was no easy task and it says much for the senior officers of both Navies that it was done in an atmosphere of complete cordiality and co-operation.

From this it will be seen that there is solid ground on which to build an Indian Ocean Pact. The Navies of Great Britain, India and Pakistan, together with those of the Commonwealth Countries, especially Australia and New Zealand—who would certainly be indispensable partners in such a pact, have worked in the closest harmony hitherto. It is essential that they should continue to do so in the future; for each has their own vital contribution to make.

#### BASES

How do the lessons of the past point the way to the future? We come first to the age-old problem of bases. Neither India nor Pakistan are well served for bases. India has Bombay and Cochin on the West Coast; and Madras, Vizagapatam and Calcutta on the East Coast. Bombay is the only really good harbour. Pakistan has only Karachi and Chittagong. Ceylon has Colombo and the all-important Trincomalee.

With the increased range of the modern bomber and the possibility of the atom bomb or, at the best, bombs of far greater destructive power than those used in the late war, no base can be considered safe from air attack. It would therefore appear to be suicidal to attempt to concentrate all our resources at one or two bases. We have already seen that India and Pakistan are short of good harbours and many of the other Countries bordering the Indian Ocean suffer from the same shortage. If their resources were pooled, the problem would certainly be simplified.

The strategical importance of the island groups in the Bay of Bengal and the Arabian Sea must be kept in mind. In their advance westwards the Japanese made use of the Andaman and Nicobar Islands. There are good harbours in both these groups and it is believed that the Japanese established at least two forward aerodromes in them. In the event of a future attack from the East these two groups might be extremely useful. There are also several potential harbours in the islands of the Mergui Archipelago.

In the Arabian Sea, running in a southerly direction from off the West Coast of India and Ceylon, are the Laccadive and the Maldive Islands and the Chagos Archipelago. Further West there is also Madagascar, which we were forced to occupy when the Japanese threat to India was at its height.

When one remembers the vital part some of the small islands played in the Pacific War one cannot afford to ignore the possibilities of these island groups in the Indian Ocean.

Next we come to the retention of sufficient sea forces to maintain communications between these bases and to safeguard the flow of vital sea trade. It only needs a brief glance at an atlas to make one realize what sea trade means to India and Pakistan; this trade must still be protected, but, we must ask ourselves, protected against what? The answer is surely first and foremost against the submarine and secondly against long-range aircraft.

Twice during the first half of this Century has total submarine warfare nearly succeeded. Both times, as it happened, the Indian Ocean escaped lightly; but a third time may be very different. First priority must be anti-submarine craft of a type capable of dealing with the modern submarine. It is of little use expecting to combat modern submarines and modern aircraft with antiquated ships with a maximum speed of only twelve knots, hastily converted into warships by mounting a gun forward and putting half a dozen depth charges aft. Priority must also be given to long-range fighter aircraft and advance air-strips. Here the island groups may well prove their worth.

In an article by the present writer in the JOURNAL of 1937, it was suggested that one of the forms of attack to which India was vulnerable was the landing of arms, money, or small bodies of troops to assist rebellion. This possibility will be even greater in the future. India and Pakistan between them have got some three thousand miles of coastline to protect and this will have to be done mainly by sea and air patrols.

A third point is the possession of a well-equipped and well-trained striking force ready to take action the moment war is declared. This is most important, especially to an alliance of Countries as widespread as those belonging to an "Indian Ocean Pact." Quite apart from anything else, the knowledge that such a force was available would be of tremendous moral value to those smaller Countries on the fringes of the Indian Ocean. India as a geographical centre and as one of the senior members of the Pact would, probably, have to be the main base of such a force. The force itself would, of course, include all three Services, and the naval portion should include aircraft-carriers and a repair ship. There should also be a number of ships earmarked for transport duties at very short notice.

Finally, of all the lessons to be learned from the past, there is none more important than the need for complete co-operation between the Countries joining in the Pact. In other words, there must be a joint planning staff, and all three Services of all the Countries concerned must get accustomed to working together.

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<sup>1 &</sup>quot;India's Sea Defences" in the JOURNAL of November 1937, p. 792.

# NATIONAL PREJUDICE HISTORIES AS A CAUSE AND CURE

By LIEUT.-COLONEL L. H. LANDON, R.A.

O some of us in the Fourteenth Army, engaged with the Jap on the borders of India and Burma in 1944 and 1945, and following as best as we could by means of the wireless and our paper, "S.E.A.C.", the events of those heroic years in Western Europe, it seemed that at last two great nations had been able to cast away their national prejudices in order to co-operate fully, without reserve or arrière-pensée, in a great cause. This was the first time in history that such a fusion had been achieved between two foreign Powers who had no political ties, though the nations of the British Commonwealth had for many years past pointed the way. For us, too, this miracle—so full of hope for the future of the World—was personified in the figure of General Eisenhower, the first man, it appeared, able to raise himself above the prejudices and interests of one nation, to dominate his time as a citizen and soldier of Western Civilization, and thus to enable two great nations to see with the same vision and sink their petty jealousies in a common cause. Possibly the 7,000 miles or so which separated us at that time from the theatre on which this drama was being played tended to over-simplify the issues and to invest the achievement with an unnaturally rosy light. We were, however, not so naive as to think that it was achieved without difficulties, differences of opinion and occasional setbacks, but we judged that the outstanding results attained could only have been the fruit of a supra-national vision on the part of the leaders of both nations, and especially on the part of the instrument who carried the vision to success—the Supreme Allied Commander.

It was therefore with unusual eagerness that I, for one, awaited the publication of the General's book. I looked for an account of that Crusade written for the World as a whole, and for all posterity, by a leader of Western Civilization of which we are all the heirs. When I came to read the book I realized that General Eisenhower had written his book primarily for the American public and from the point of view of an American General. This was to me a profound disappointment, for I felt that he had missed a golden opportunity of striking a powerful blow at the powers of prejudice, ignorance and mistrust which do still, alas, divide the peoples even of the Western civilized World and poison the relations between them.

General Eisenhower has, of course, every right to write as he did, for he is, in fact, an American General and his immediate public is American. Nor do I think that he has been unfair to his Allies. It has been said that he has been unjust to certain British commanders, notably to Field-Marshal Montgomery. Personally, I think he has been completely fair to British Generals. It is right and proper that great men should have their own ideas and expound them and believe in them, provided that they honestly believe that those ideas will most effectively further the common aim and not merely their own personal glory; it is also right and proper that the Supreme Commander, having weighed all the views submitted to him, should make a decision and enforce it once made, and that his subordinates, whatever their personal opinions, should loyally abide by their chief's decision—and this is what happened. Eisenhower in his book fairly sums up the different points of view in each case and states why he made his decisions, he never pretends that his decisions were the only right ones. To my mind he is most generous in his tributes to many British personalities, and unfair to none. That he had his likes and dislikes is

apparent, but then that is a human failing, and he never allows his dislikes to make him unfair. It is not in his treatment of distinguished persons that he shows his national bias—the only person to whom I can accuse him of being less than fair and generous is Thomas Atkins and his mates in the other Services, and his friends and relations in the fields and factories at home—but it is his emphasis throughout on the American effort and on the American side of the War that gives his book an American bias. In action he was able to make himself a supra-national leader (and in this he was met half-way by the British), but in writing he allows his national outlook to prevail. In this he fell short of his destiny.

Another recent book, this time by a British leader—Mr. Winston Churchill, recently published in serial form by a French daily newspaper, has aroused some bitterness in many Frenchmen, even amongst the most Anglophile. This French reaction came as an unpleasant surprise to the average Englishman, for to us it seems that Churchill has been most fair and sympathetic, even tender, in his treatment of his relations with France during the War; nevertheless among the many Frenchmen with whom I have discussed the subject, the majority have criticized him for being unfair to France, some in terms of great bitterness: the least adverse comment I heard was that though Churchill spoke the truth, he spoke it twenty years too soon; he has rubbed salt in many deep wounds which had just started to heal.

National susceptibility and prejudices do still therefore exist, and are reflected in the tone of the Press and in the conversation of private individuals, in all Countries. It augurs ill for the early realization of the concept of Western Union, that even people of education and good will who are the heirs of Western Civilization, are still influenced by purely national prejudices and harbour mistrust of their neighbours—a mistrust born always of ignorance of the neighbour's history, economic necessities and mental outlook. Prejudice, ignorance and mistrust between the nations wrecked the generous experiment of the League of Nations, and to-day hamper the work of U.N.O. Until these evil powers are exorcised we shall never achieve that spiritual unity which alone can lead to the cultural, economic and political unity which is essential for the peace and progress of the World.

This unity will only be achieved when all people of the Western nations are imbued with the feeling of the heritage of Western Civilization and look upon themselves primarily as citizens of that Civilization, and only secondarily as citizens of France, England or America, in the same way that people now consider themselves primarily as citizens of their Country, and only secondarily as citizens of their county or province. In Medieval times there existed a common bond which held together the civilized World, a bond expressed in the term Christendom. That bond disappeared before the selfish forces of nationalism, which have increased in power continuously until the present day, resulting always in more frequent and more devastating wars. If we want peace we must find a common bond which will forge together first of all the peoples of Western Europe and America, and which can later be extended gradually to include all mankind. That bond can be found in the heritage of Western European civilization which has come down to us all from Greco-Roman-Christian origins, and is still a link between the people of the West: the link must be strengthened into a bond. How is it to be done? Here again the British Commonwealth points the way, for here is a community of people who, whatever their differences, work together in harmonious co-operation to a common end. The reason is, I feel, that its people are educated to look at the World and its problems in the same way and, however far apart geographically, however different their

interests, they have much the same reactions to any given situation, because they have been brought up from childhood, in the family and in the school, with the same outlook on the World—that is to say that they have been taught history and political geography broadly from the same point of view, and have been taught to esteem each other. The one exception—Eire, proves the rule, for the average Southern Irishman is taught history from an anti-British point of view—and so Eire has left the Commonwealth.

Unfortunately, at present history is almost universally taught to the young of all nations from the "Top Nation" point of view (with apologies to the authors of 1066 and All That). The achievements, and especially the military glory, of their nation are extolled and its errors are glossed over, while the achievements of other nations are soft-pedalled and their mistakes are magnified. Little American boys, for instance, are taught that George III was a tyrant, whereas in fact he was a benevolent, though misguided, old gentleman; from this it is a short step to the generalization that all British are tyrants. Little English boys are taught that Henry V was a glorious hero, whereas in fact he was a common aggressor—just as was Napoleon, who is pictured as a hero to little French boys. Nor is it only the teaching of history that is biassed; many other subjects are given a national twist, and this process of miseducation is continued after we leave school in most of what we read or hear. And so we all of us go out into the World with ready-made prejudices ingrained into us, and most of us never lose them; from this arises mistrust and dislike for foreigners—the root of many of our present difficulties.

Fundamentally, therefore, the peace of the World depends on education and a change of heart and outlook among our educators. Those responsible for the education of the young in Western Countries should get together and work out an objective teaching of history from the point of view of Western Civilization—glorifying its progress in Freedom, Law, Government, Art and Science; pointing out candidly its defects and failures. Wars should be treated (as we now in teaching English history treat the Wars of the Roses or the Civil War) as the perhaps necessary results of human weakness and error, and as subjects for repentance, but not for glorification. Thus we could hope that future generations of men and women of Western Europe would look upon themselves as members one of another, working together for a common aim and leaving their old national rivalries to the friendly world of Sport—just as the old rivalry of the Roses is now fought out on the cricket field. Perhaps all this is too much to hope for—a Utopia. But without this Utopia of goodwill towards men of other nations, there will be no peace.

Secondly, the peace of the World depends upon the free movement of people and ideas. Anyone who has recently crossed the Channel in either direction will realize the existence of the "Wooden Curtain," as the correspondent of *Le Monde* calls it, on both sides of the Channel.

The recent exchange of British and French Army officers for short visits has shown how prejudices can be broken down and firm friendships established by direct personal contacts. But although nearly a hundred officers on each side have so far been exchanged, it is a drop in the ocean compared with the mass of prejudice and ignorance which exists on both sides of the Channel.

Unless those Countries which are the heirs of Western Civilization sink their differences and prejudices, and integrate their interests in a common super-nationality, War is inevitable, and with it the end of civilization for many centuries.

#### THE MERCHANT NAVY IN WAR

By CAPTAIN W. H. COOMBS, C.B.E., Master Mariner.

POR naval officers who were brought into close contact with the Merchant Navy in the last two great wars, there will be little new in this article; but for others in all three Services it may be useful to outline the constitution and organization of that fourth Service on which we are wholly dependent for the sinews of war.

No attempt will be made to deal with strategical and technical matters affecting the employment and safety of merchant ships in war-time; the object is to show the system on which the industry is run in peace-time and how this is adapted to meet war requirements.

The Merchant Navy, the British Shipping Industry, the Mercantile Marine—the terms are almost synonymous, may be defined as a "fleet" of some three thousand vessels designed to carry passengers and cargoes of almost infinite variety in order to sustain the seaborne trade of the British Commonwealth of Nations, and to earn by carrying for foreign interests the major portion of our invisible exports. The term British Shipping naturally expresses the intricate machinery of ownership and management and shore administration and, of course, the seagoing personnel comprising some 100,000 officers and ratings.

A salient point to be borne in mind when considering the war-time function of the Merchant Navy is that in peace time it has always been developed with almost complete disregard of any demands likely to be made upon it in time of war. The idea of a strategic reserve of merchant ships has never found favour in Britain, as it has very markedly in the United States; nor have subsidies for vessels of greater speed than that dictated by the economics of their trade—such as were almost certainly granted to the owners of the very fast Japanese tankers brought into service shortly before the 1914-18 War, although it may be claimed that governmental assistance in bringing out the two Cunarder "Queens" was given on the grounds of their military value in the event of war. Considerable outside pressure had to be exerted before the British Admiralty would provide pre-war training for merchant crews in the use of defensive armament for merchant ships. The maintenance of a small but highly efficient permanent Royal Naval Reserve of officers and ratings and the establishment of naval liaison officers in a few of our principal ports was, and is, almost the only official peace-time connection between the Admiralty and the Shipping Industry, and the only active recognition of the latent importance of the Merchant Navy in any future war.

This is in accord with historical precedent and might be thoroughly sound in a sane World. But there are those who question the World's sanity, and it may well be that it is dangerous to assume that in any future emergency sufficient time will be on our side in which to convert a peaceful trading fleet into a vitally important and immediately effective part of our war organization. It is argued—and with some justification—that the only peace-time function of the Merchant Navy is to trade successfully and that commercial efficiency should not be hampered in a highly competitive international industry by burdens of a military character, such as uneconomic speeds, uneconomic sub-division of cargo spaces, uneconomically heavy construction, or by dislocating the services of the crews by time devoted to training in the arts of war.

It is also argued that the defence of merchant shipping in war-time is the function—indeed the predominant raison d'être—of the Royal Navy, and that the wisest policy

in the national interest is to permit the Merchant Navy to develop on its own lines in peace time, unhampered by any consideration of the requirements which would be imposed by a war which may never happen. This is a question of high policy upon which I am not equipped to express an opinion, but I am convinced that had the average speed of our convoys in the late war been greater, and had our shelter-deck ships been more highly sub-divided, many ships which were torpedoed would not have been torpedoed, and many that were hit would have remained affoat, and, of course, many valuable lives would have been saved.

It must be admitted, however, that if we had designed our merchant ships to meet war needs, far fewer might have been built for profitable occupation, with the result that our merchant fleet might have been numerically even less adequate than it was to meet the enormous demands of the War.

#### Types of Ships

Merchant ships can roughly be classed under the following headings—passenger liners, cargo/passenger liners, "tramp" steamers (or general traders), tankers, and coasting vessels. Tonnages range from a few hundred to 83,000 tons and speeds from 6/7 knots up to close upon 30 knots. In each class of vessel there is considerable diversity of type and no firm lines of demarcation can be drawn as between the various classes. Thus a ship designed essentially for the rapid transport of passengers across the western ocean differs greatly from a passenger vessel trading on the long voyage from this Country to the Antipodes.

A cargo/passenger liner generally trades on a regular route, is scheduled to load and sail on predetermined dates and is usually of a highly specialized design evolved to meet the needs of passengers and of cargo shippers on her particular trade.

The "tramp" steamer—at one time and possibly still, the back-bone of our Merchant Navy, is built as a rule to trade profitably anywhere. She usually carries bulk cargoes such as coal, grain and ore, of small relative value in comparison with the general cargoes carried by cargo/passenger liners. Consequently economy in operation—obtained primarily by economy in fuel consumption, which, of course, is mathematically related to speed—is of prime importance if a tramp steamer is to compete successfully in the World's freight markets. These slow, ponderous vessels have been a vitally important factor in our sea commerce, and their ability to carry large cargoes has been of inestimable value in war-time. But their safety in convoy presents a particularly difficult problem owing to their lack of speed and, at times, poor manoeuvrability. Under modern trading conditions a long, almost undivided shelter deck space is commercially advantageous, but it reduces the reserve bouyancy of a torpedoed ship.

The tanker, as her name implies, is designed for the carriage of fluids in bulk, chiefly petroleum products. These ships vary in size from small coasters to vessels of some 25,000 tons deadweight.<sup>1</sup> The loading areas of tankers are comparatively few in number and are, of course, near the World's chief oilfields, e.g., the Persian Gulf, Dutch West Indies (the refineries for Venezuelan oilfields), California and the eastern U.S.A. oil ports, Borneo, etc. Their ports of discharge are world wide. The military and economic importance of tankers in war-time is self-evident and it is no overstatement to assert that the operations of the Navy, Army and particularly of the Air Force are dependent upon the safe arrival of the cargoes which the tanker alone can bring in adequate quantities.

<sup>1</sup>The tonnage of tankers is usually expressed in tons deadweight, those of other merchant vessels in gross tons, and of the King's ships in tons displacement.

It is worth noting that, by their characteristic design, tankers are, of all merchant ships, the most easily adaptable for carrying and operating aircraft for the protection of convoys.

The coasting vessel, specially designed in various forms to trade around our coasts and to nearby continental and Irish ports, is necessarily small in size, and light in draught to enable entry into small ports when her trading so demands. They are regarded, together with the fishing fleet (not dealt with in this article), as one of the finest "grounds" for the training of merchant seamen. They proved of great military value in the late war: they largely maintained the East Coast traffic under conditions of almost continuous danger, and were probably the most effective component in the arrangements made for the landing of army stores and equipment on the Normandy beaches in 1944. Of all sections of British shipping, less progress has been made by way of replacing old tonnage by new ships in the coasting fleet than in any other section. This is probably due to the fact that the trade finds itself in competition with nationalized rail and road services and, although it is itself under private enterprise, it may be that its operators regard the future with uncertainty. A heavy decline in the number and efficiency of our coastwise vessels would doubtless be regarded by naval authorities as a serious matter.

#### **OPERATING**

The foregoing has but very sketchily outlined the working "tools" of British shipping. It should suffice, however, to indicate the diversity of the industry. It follows that shipping can only successfully be operated by a great number of specialists ashore and afloat. The operation of a tramp steamer demands knowledge and experience on the part of her owners and managers which few passenger liner companies would claim to have at their disposal. Similarly the management of a passenger service on any particular trade demands a technique to which no tramp steamer owner would make claim. Coastwise trade is a hidden mystery to all who are not engaged in it; and the operation of tankers presents many technical problems wholly confined to that branch of the industry.

So too with the crews; specialization is becoming increasingly apparent, particularly among shipmasters, navigating and engineer officers.

The organization of the shipping industry as between its component parts and in relation to the outside World is necessarily complex, and not without general interest to students of shipping. For reasons of space only a brief outline will be attempted here.

The shipowners, in the proper protection of their trading and technical interests are organized under the aegis of the Chamber of Shipping, except in Liverpool where they are organized in the Liverpool Steamship Owner's Association. These two bodies are in turn linked to form the British Council of Shipping. They deal inter alia with such matters as statistics, contractual documents, technical questions, parliamentary matters, and in fact are well qualified to speak with the highest authority for the shipowners as a whole. In peact-time the Chamber or the Council are in constant touch with the Ministries and Government departments concerned with shipping—chiefly the Ministry of Transport, the Board of Trade, and the Admiralty. They are able to arrange whenever necessary, that the point of view of shipowners can be voiced in Parliament. In time of national emergency these representative organizations of shipowners have proved of inestimable value to the Government in placing vast knowledge and experience at the command and disposal of the Admiralty and Ministry of Transport.

To deal satisfactorily with industrial (i.e., personnel) questions, the shipowners are organized in the Shipping Federation Limited (in the case of Liverpool the Employers' Association of the Port of Liverpool), which bodies are represented equally with the officers' and seamen's organizations upon a voluntary, non-governmental and very effective negotiating body known as the National Maritime Board. This latter body has over a long period of years worked out a volume of agreements covering the conditions of employment of the vast majority of shipmasters, officers and seamen of the British Merchant Navy.

It is worthy of note that these agreements are signed by none of the parties and are, with negligible exceptions, most worthily honoured by shipowners and seafarers alike. That the shipping industry is now singularly free of "industrial troubles" should not be without significance to less smooth running industries.

On the seagoing personnel side the organization of the industry is similar but not identical to that of the shipowners. On technical questions shipmasters and officers are, in the main, represented by the Officers (Merchant Navy) Federation, comprising most of the several bodies representing shipmasters, navigating and engineer and radio officers. These matters are also handled by the Honourable Company of Master Mariners and the Institute of Marine Engineers often in conjunction with the Officers' Federation.

On the industrial side, each of the several associations and unions of shipmasters and officers are represented on the appropriate panels of the National Maritime Board. The sailors, firemen and catering staff are represented on their appropriate panels of the N.M.B. by the National Union of Seamen. Both the shipowners' associations and the bodies representing seafarers are called upon and readily agree voluntarily to serve on official committees and advisory bodies concerned with shipping problems. The net result of this somewhat complex internal organization of the industry is that its own internal affairs are run in a commendable atmosphere of harmony and co-operation, and that in its contacts with the outside World it is able to speak authoritatively—and usually with unanimity. Above all, the value of organization is that the Government of any day is able to call with certainty upon a large group of men each highly specialized in his own particular field and collectively able voluntarily to assist the administration in the solution of war-time problems.

#### TRAINING

In the operation of a "fleet" of ships so varied in size, type and function as those of the British Merchant Navy, there is necessarily a great deal—possibly undue—diversity in the type and training of the officers and seamen called upon to man them.

The Merchant Navy has always been markedly democratic, in that opportunity has always existed for the unprivileged to reach the top, on merit. In the past possibly 25 per cent. of navigating officers' certificates of competency have been issued, after due examination, to men who commenced their careers as seamen. It is, however, more usual for an aspirant to officer rank and responsibilities to enter as an indentured apprentice, cadet or midshipman.<sup>2</sup>

To an increasing extent the ship owners are demanding a higher standard of general education than hitherto, and school certificate standard is generally stipulated. The average age of entry has, during recent years, risen to approximately 16½. Pre-

<sup>&</sup>lt;sup>2</sup> Nomenclature varies in different companies and there is technically a legal distinction between an indentured apprentice and a cadet or midshipman.

sea training is becoming a sine qua non. This is available at the older training establishments, such as the Cadet Ships "Conway" and "Worcester," and at the Pangbourne Nautical College, where the training lasts from two to four years. A more recently established officer training establishment is at Warsash, where the pre-sea training course of one year is operated by the University College of Southampton. Short intensive courses are available at a number of the principal ports. The Shipping Federation Ltd. offers short courses of pre-sea training for boys intending to enter the service as ratings.

Approximately 50 per cent. of time spent at a training establishment, up to a maximum of one year, counts as part of the qualifying sea time required before a young man can submit himself for examination for a 2nd Mate's certificate of competency. The remainder of the necessary four years must be spent in sea-going vessels in which practical experience and instruction are gained. The quality of the instruction and training received varies greatly as between ship and ship, and depends in considerable measure upon the interest of and time available to the Captain and his officers.

In most ships a syllabus outlined by the Merchant Navy Training Board is followed. Correspondence courses in theoretical work are available and periodic unofficial examinations are arranged. I am among those who consider that there is room for further improvement generally in the system of selection and training of Merchant Navy officers as navigators and engineers. The problem is before the Merchant Navy Training Board, but its speedy solution is difficult owing to uncertainties as to the operation of the Education Act. The question is of much importance, especially in view of progressive development in the training systems in other countries whose shipping industries are competing with ours. It can fairly be held, I think, that no single factor in the safe and successful operation of a merchant fleet can be more important than the efficiency of the officers.

The training system for engineer officers is naturally different from that of navigators. As a general rule, entrants serve a five-year apprenticeship ashore in a shipyard or approved engineering works. Subsequent service at sea for 18 months as an uncertificated engineer officer entitles a young man to submit himself for examination as a 2nd class Engineer Officer. It is theoretically possible for an engine room rating after a long period at sea to submit himself for examination without having served an apprenticeship ashore, but few, if any, do in fact so qualify. The impact of the sea therefore comes several years later in life to the young engineer officer than to the navigator, and adjustment from modern life ashore to the inescapable features of shipboard life is inevitably the more difficult to the former. Thus the wastage of junior engineer officers to the Service is even greater than is the case with navigating officers-although that is disturbingly high, but may, at the present time, be lessening. There are those, like myself, who consider that there is much to be said for introducing into the Merchant Navy a system somewhat similar to that obtaining in the Royal Navy, in which young engineer officers are trained in closer consort with their contemporaries and opposite numbers of the deck department. The opposite view is, however, very strongly held, not only by the engineering unions but by senior engineer officers of great experience.

#### THE ROYAL NAVAL RESERVE

The Royal Naval Reserve is voluntarily and solely recruited from officers and men of the Merchant Navy, except in the case of the Secretarial Branch among whose officers are those employed in shipping offices ashore. In the matter of the necessity and size of the R.N.R., genuine differences of opinion exist. On the one hand it is held that the availability of a trained reserve of officers with long and up-to-date seagoing experience in merchant ships is a vital necessity to the Royal Navy, particularly in the early days of a war. On the other hand, it is asserted with equal force that the efficient running of the Merchant Navy is so important at that same time that it is unsound to denude merchant ships of many of their best officers. The excellence of the services rendered to the Country by the Royal Naval Volunteer Reserve, recruited from non-professional seamen, is used as a point in this argument by both sides. At the present time and for several years to come, the Country could, in the event of emergency, have at its command a large number of war-trained and sea-seasoned R.N.V.R. officers, and it is admitted that the current need for a large cadre of R.N.R's may not be as great as hitherto. With the passage of years, however, it would seem inevitable that the Merchant Navy can well become the sole source of supply for an immediately available reserve of officers with adequate deep sea training and experience.

## WAR-TIME DEMANDS ON BRITISH SHIPPING

On the outbreak of war, British shipping is called upon voluntarily to re-organize on a basis vastly different from that existing in peace-time. In the last two wars this metamorphosis has, on the whole, been effected smoothly and in a typically British way. Success in this has, in my opinion, followed more as the result of intelligent improvization and, above all, of the co-operation and goodwill of men who know their business, rather than as the result of rigid planning.

On the outbreak of hostilities, all merchant shipping immediately comes under the ultimate control of the Admiralty, but the detailed administration of merchant ships, e.g., manning, victualling, loading and discharging, remains entirely with the owners. Some vessels, however, are requisitioned on behalf of the Admiralty for a variety of naval duties—for conversion into armed merchant cruisers, hospital ships, examination steamers, etc. Some are placed under the White Ensign and manned entirely by R.N. personnel. Others partly or wholly retain their Merchant Navy personnel and are commanded and officered in whole or in part by R.N. or R.N.R. officers. In such cases a curious and not wholly satisfactory position arises in which some or all of the crew serve as quasi-civilian seamen under what are known as T124 Articles of Agreement. The system works, but has obvious such faults as anomalous differences in pay, conditions and status which are bound to disturb shipboard harmony and create disciplinary problems.

The Ministry of Transport (which as the Ministry of Shipping, took over in 1939, and still retains the functions formally discharged by the Mercantile Marine Department of the Board of Trade) retained in war-time its normal statutory responsibility for the operation of the Merchant Shipping Acts, dealing with such matters as safety, load line, crews' agreements and marine casualties, etc. As a war develops, the Ministry of Transport becomes to an increasing extent the Ministry with which the shipping industry as a whole is most intimately connected, notwithstanding the enduring, overriding authority of the Admiralty in shipping matters. Here again good sense seems to prevail over precise legal definition and demarcation, if such in fact exists, and in the result the Admiralty, the Ministry of Transport and the Shipping Industry work as a team and get on with the job. Whatever the precise constitutional "set up" may be, the war-time shipmaster can be said to regard his employer, e.g., his shipping company, as his master in matters concerning the domestic affairs

of his ship; the Admiralty as the source of his orders re the routing and self-defence of his ship; and the Ministry of Transport as his friend and potential critic under the Merchant Shipping Acts. In war-time, as in peace-time, notwithstanding the jurisdiction of these various authorities, the shipmaster—under Admiralty instructions—still remains ultimately responsible for the safety of his ship. He continues, if he is a good shipmaster, to regard himself as "Master under God," paying due and proper regard to the orders of these several authorities, but under a duty at all times to act on his own initiative in the best interests of his ship.

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# THE VALUE OF COMMANDOS

By Brigadier T. B. L. Churchill, C.B.E., M.C.

HE publication of *The Green Beret*<sup>1</sup> has revived interest in the Commandos both in the minds of the public and in Service circles, and will direct attention again to the old controversy as to whether these specialized troops should find a permanent place in the Army.

This book has been written for the general reader and, while claiming that it is the authentic story of the Commandos, the author makes it clear that it is not their official history. Few people will contest his claim, for in the compass of 354 pages he has contrived to include some description of the formation of the force and the type of men who joined it, together with an account of all the exploits in which they were engaged. Necessarily, the book is packed with incident, and for this reason it is doubtful if it can be taken in one dose without incurring the penalty of indigestion; but it is told in a vigorous and graphic style which well suits his subject, and the author is to be congratulated on his achievement. In this small and attractive volume the Commando saga is available for all.

Among Commando soldiers themselves, however, the book will be critically dissected. The chief complaint will be brevity of treatment. The joint problems of author and publisher will receive scant respect from the men whose story this book tells. Few people are ever satisfied with the account of a battle in which they took part, and the omission of an incident which formed part of a personal experience will seldom be forgiven. It is possible that the pioneers who joined the Commandos in the dark days of 1940 will feel that Mr. Saunders has not quite captured the atmosphere of those early days. Men joined the Commandos in the spirit that their ancestors joined the Crusades:

" Qu'il était bleu, le ciel, et grand l'espoir!"

There was a sense of urgency, a striving to achieve an ideal, an individual determination to drive the physical body to the limit of endurance to support a moral resolve. This individual determination was shared by every member of the force, and such heights of collective idealism are not often reached in the mundane business of soldiering.

From the professional point of view, it is a pity that the book could not in some respects have been made to approximate a little more nearly to the form of a history; one would like to have seen some statistics as to the number of raids or actions carried out in successive years; an analysis of casualties sustained; and a graph showing the strength of the Commando force at different periods of the War. This raw material is indispensable for those who wish to form an objective estimate of the "cost" of the Commandos, to set against their achievements.

Mr. Saunders, no doubt purposely, avoids controversial topics, but most readers of his book, and certainly all regular soldiers will ask themselves, "What are the arguments for and against Commandos?" An attempt will therefore be made to set out these arguments, and to discuss the various problems that they raise.

Certain voices have already been raised in print against the Commandos; Mr. Winston Churchill quotes the official opposition with which he met when raising them.<sup>2</sup> The chief charges made at this time were that the formation of Commandos

<sup>&</sup>lt;sup>1</sup> The Green Beret, by Hilary St. George Saunders (Michael Joseph, Ltd.), 15s.

<sup>&</sup>lt;sup>2</sup> The Second World War, Vol. II, p. 413.

implied a slur on the efficiency and courage of the regular battalions, and that there were no jobs performed by Commandos that the battalions could not carry out. Since the War, Field-Marshal Earl Wavell has expressed himself as never having been a believer in Commandos. He contends that "a complete living unit, taken and trained for the special work required, with the elimination, if necessary, of the weaker men, would produce better results."

Recently an article appeared in the Army Quarterly<sup>4</sup> expressing much the same views as have been mentioned above, but adding that the Commando force was allowed to expand to such an extent that it ate up far too many junior leaders who were badly needed in the infantry battalions. It added: "Where it is impossible to produce specialized parties by adapting existing units, they should be allowed to exist only so long as they fulfil the actual function for which they were designed."

The above-mentioned quotations taken together can be fairly said to represent the anti-commando viewpoint. Any serious student of military affairs will admit the force of many of the arguments and will sympathize particularly with the desire to foster and retain the regimental spirit in infantry regiments, and also with the desire to eliminate the draining of the best junior leaders from the battalions. But, as always, the problem is not an easy one, and there are certain difficulties inherent in the suggestions made.

It must be admitted that the infantry brigade is a balanced formation designed for attack or defence. It is organized for sustained effort, and consequently includes within its establishment considerable resources of fire power, transport and communications. The Commando brigade, on the other hand, is designed for one purpose only—the attack: attack at speed from the sea. It is not organized either for sustained effort or for defence. It is a formation to be used by a commander for a specific offensive purpose, and as soon as that purpose is completed it is intended to be withdrawn, or relieved by a regular formation for re-employment on a similar task. Taking into account the qualities conferred by its one hundred per cent. volunteer content, coupled with the fact that it is designed, organized and trained to attack, it follows that it will carry out more efficiently and quickly its own tasks than would an infantry brigade.

It has been suggested that an infantry battalion, specially trained and perhaps slightly reorganized, could carry out any commando tasks. Equally, then, it would be contended that an infantry brigade could carry out the task of a Commando brigade. But what is to happen to the infantry brigade which suddenly loses one of its battalions for Commando training, or to the division which is relieved of one of its brigades? All the balance will be disturbed. What will be the views of the brigade or divisional commander, trying to hold his allotted portion of a front? Or trying to train his formation for its future tasks?

At this point it would be as well to say a word about the employment of Commandos. Too often they are thought of as assault formations to be used in an initial landing, and then put back into store; whereas, in fact, they should be kept under the hand of the Corps Commander for repeated use, as chances offer, in their characteristic role. This was brilliantly illustrated by General Sir Miles Dempsey in the Sicilian and Italian campaigns between July and September, 1943, when he was

<sup>3 &</sup>quot;The Soldier as Citizen," Sunday Times, 26th August, 1945.

<sup>&</sup>lt;sup>4</sup> "Are Commandos Really Necessary?" By Lieutenant-Colonel J. P. O'Brien Twohig, Army Quarterly, October, 1948.

commanding the 13th Corps. In the nine Commando operations that were carried out during this period, each differed from the other in the type of objective, the craft used to transport the Commandos, the obstacles to be surmounted, and the time available for mounting the operation. To say, therefore, that any battalion or brigade could "with a little training" fit itself for such variegated tasks is, to say the least of it, an understatement. A battalion can, in a month or two, be trained to step out of landing craft and to perform specific tasks, on a specific beach, as many were prior to D-Day in June, 1944; but it would require at least a year's training to enable it to compete with successive and differing tasks such as those that were assigned to the Commandos working under the 13th Corps in Sicily and Italy in 1943.

The writer of this article has talked to General Dempsey on these matters in order to obtain the views of a high commander with actual experience of operating Commandos in both the Mediterranean and North-West European theatres in the late war.

For the initial Sicily landings 13th Corps had two Commandos under command.<sup>5</sup> The task given to one of them was to land and capture a battery. This task could have been performed by normal infantry with a little specialized training and time for rehearsal. The other Commando had to land over a wide stretch of sharp and wet rocks and capture a coastal battery, and then continue inland across a peninsula to capt ure a second battery some three miles further on. This was a tricky job involving efficiency in boat work, landing technique and high speed, and would have been beyond the capacity of an infantry battalion.

Immediately after the capture of Syracuse came the Commando infiltration into Augusta by sea. For this operation Lieut.-Colonel Mayne—the commanding officer of the Special Raiding Squadron, had orders that if the seaward defences were alert and they found themselves involved in what looked like an unequal fight, they were to haul off and return.

This again was a job which, in General Dempsey's view, could certainly not have been given to an infantry battalion. The Commandos pulled it off, due to their ability to mount a raid at short notice and to get their orders out quickly, and to their knowledge of boat work.

Very shortly afterwards the 50th Division had to put in a serious attack on hill positions guarding the southern approach to the Catania plain. The moment success became assured, the airborne brigade which was standing by to drop on the Primosole bridge was told to complete its preparations, and No. 3 Commando was ordered to embark at Augusta for a landing further up the coast in the bay of Agnone, to capture the nearer of the two bridges which lay some five miles inland, and separated 50th Division from the Catania plain.

No. 3 Commando carried out the landing under fire that night and got to the bridge where stiff fighting developed at dawn. Though they were driven off it in the end, they succeeded in preserving the bridge intact until the infantry got up to it. This again was a task which only Commandos could have carried out.

The next Commando task came immediately after the capture of Messina. The assault on the "toe" of Italy was being prepared and it was essential to discover

<sup>&</sup>lt;sup>5</sup> These were No. 3 Commando and The Special Raiding Squadron. The S.R.S., though not specifically called a Commando, was nevertheless an almost identical unit. Its personnel were volunteers, their training had been similar to that of the Commandos, and their equipment was the same.

whether the Germans were awaiting invasion in strength across the Straits, and if so, their dispositions. The Commandos were instructed to organize a ferry service by night in conjunction with the Navy, to send news by wireless or to bring information back by boat, as a result of reconnaissances. Several officers and men were put ashore and one or two informants were brought back to Sicily for interrogation. This was a task which an infantry battalion could not have organized and carried out at such short notice.

Two landings followed in Callabria, the first carried out by Mayne's Commando near Bagnara, which seized the town and held it till the 13th Brigade reached them. The second was carried out by an infantry brigade with some Commando troops attached, and involved a landing at San Venere and an advance to capture the town of Pizzo. Owing to their lack of aptitude for this type of work and the cumbersome equipment of the regular formation, this assault was not altogether a success and the German garrison made good its escape. These two landings taken together well illustrate the difference in performance between lightly equipped Commandos trained in every sort of assault work, and the slower-moving infantry.

The last Commando operation to be carried out in Italy under General Dempsey's orders took place on the East coast near the port of Termoli. It looked as if the enemy was going to form a strong defensive front along the river Bifurno and, unless his flank could be turned quickly, the advance was bound to be held up for a very long time. Accordingly three Commandos were sent off at very short notice to carry out an assault landing, in the course of which, owing to technical naval considerations, they had to tranship at night and in a swell, a few miles off the enemy coast, from infantry landing craft into assault craft. This is a difficult operation even in good weather in daylight, owing to the difference in height between the two types of craft. However, the landing achieved complete surprise and the Commandos captured the town after a sharp fight. Though there was to be three days of bitter fighting with the 23rd Panzer Division before the Boche withdrew, the object was achieved.

Later, in North-West Europe, Commandos were again employed under General Dempsey's orders; they were given initial tasks in the assault on D-Day, and they then joined up with the Airborne Division across the River Orne. It is not contended that none of their assault tasks could have been achieved by specially trained battalions in this case, but there was one task for which a force of Commandos was kept in a floating reserve and which certainly could not have been performed by normal troops: this was the elimination of a piece of heavy artillery located on high ground to the East of the River Orne and enfilading the beaches; this gun was included in the tasks of the airborne troops, but if in the event anything had happened to prevent them from accomplishing this task, the Commandos would have been put ashore in a landing which would have involved a cliff-scaling operation with ropes and a difficult and almost certainly costly assault on the gun. It was essential to have this alternative means of destroying the gun, as its unmolested activities would have jeopardized the whole operation. Fortunately, as events turned out, the airborne troops dealt with it according to plan. Later in the campaign the Commandos were again used in typical Commando tasks at the crossing of the Rhine, and at Walcheren.

General Dempsey concluded his talk with the writer on this subject by pointing out that modern warfare required highly trained troops to carry out seaborne landings, just as it required troops trained to land from the air. It was a requirement for which a regiment or corps could be formed to fulfil, just as the invention of the tank and the consequent introduction of tank warfare required the formation of a

corps to carry it out. A study by those who know the country of General Percival's book<sup>6</sup> on the Japanese attack down the Malayan Peninsula indicates the opportunities he would have had for striking the advancing enemy columns in the flank and rear had he had a force of Commandos properly trained and equipped to attack from the sea.

The points which General Dempsey makes need no amplification for they speak for themselves. It remains only to discuss whether a Commando regiment or formation should consist of volunteers or not, and if it does, what can be done to reduce to a minimum the drain that such a volunteer force would make on the rest of the Army in high-quality junior leaders.

The examples of Commando action which the writer has quoted show the vital need for speed, initiative and resolution in Commando operations, and it is contended that however good a normal battalion is, it will be unable to keep up the required standard in successive actions in the face of the inevitable casualties and with the average type of reinforcements that are provided in war. The following description of the outlook of men who composed a battalion with a fine record in the late-war is taken from an article in the Army Quarterly? written by the C.O. who commanded them both in the Western Desert and on D-Day in N.W. Europe:—

"The individual English soldier is seldom keen on doing more than anyone else. The idea of the fairness of equal shares of both good and bad grows more popular every year . . . As the possibility of a Second Front became more and more real we did at least console ourselves with the reflection that those who were fighting a comparatively gentlemanly, if unwashed, war in the desert could hardly be expected to help to break the Western wall. In fact, we felt qualified to join that large band of those in reserved occupations and noncombatant units, of conscientious objectors and deserters who chalked on walls the exhortation to start the Second Front now . . .

"The Soldiers of the First World War have a spirit of keenness and genuine endeavour, almost a sneaking enjoyment of remembered dangers and discomforts, an acknowledgment of the good qualities and fine characteristics which do arise out of the worst aspects of war. We never approached that spirit. Those who fought well did so without hating 'the Boche,' without believing fiercely in any cause, but almost shamefacedly, as if they would not admit to doing more than they need. Soldiers of this war are ready enough to boast; but there is no general acknowledgment that anyone should be proud of reaching the front line, the 'sharp end,' and of actually fighting the enemy."

This outlook, which any last-war C.O. will recognize as typical of the men he commanded, is not sufficiently inspired for Commando work. The only way to keep a high standard is to recruit volunteers, and it follows that the wider the field is for recruitment, the higher will be the standard of the volunteer. It is not, therefore, good enough to say that the Commandos will only be drawn from this or that division, this or that corps. They must be recruited from the whole Army, from which source must also come their replacements for the casualties they sustain.

Clearly, the number of Commandos formed must be kept to the minimum likely to be required. Similarly, any tendency to form varieties of specialized units to do

<sup>&</sup>lt;sup>6</sup> The War in Malaya, by Lieut.-General A. E. Percival, C.B., D.S.O., O.B.E., M.C.

<sup>&</sup>lt;sup>7</sup> "The 6th Battalion the Green Howards in the Assault on Normandy," by Lieut.-Colonel R. H. W. S. Hastings, D.S.O., O.B.E., M.C. Army Quarterly, January, 1948.

specific jobs, which in fact could quite well be performed by Commandos, must be resisted. General Laycock, in his lecture to the Institution<sup>8</sup> in 1947, drew attention to the wastage in manpower which resulted from this practice.

The points made and the evidence produced in this article all lead to one conclusion: there is a function for Commando units in modern war, and these units should be comprised of volunteers. The Commandos should consist of the best that the Army and the Royal Marines can produce. The latter, with their great traditions of amphibious service, and whose motto is Per mare, per terram, will undoubtedly have many volunteers to offer. What is wanted is a force of composite units, consisting of volunteers from the Infantry, the Royal Armoured Corps, the Royal Artillery, the Royal Engineers and the Royal Marines, and not forgetting the Royal Corps of Signals and the Services, seconded to the Commandos and welded together into Commando units by that priceless quality which transcends every other in war—the Volunteer Spirit.

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<sup>8 &</sup>quot;Raids in the Late War and their Lessons," by Major-General R. E. Laycock, C.B., D.S.O., in the JOURNAL of November, 1947.

# PRISONERS OF WAR

By LIEUT.-COLONEL M. E. S. LAWS, O.B.E., M.C., R.A. (Ret'd.)

NE of the most distressing aspects of the last two great wars has been the deplorable treatment of prisoners of war by certain nations, and it is significant that it has recently been found necessary to hold an international conference to endeavour to obtain agreement among the powers on this question for future guidance.¹ It is interesting therefore to recall the treatment of prisoners of war during the long war with Revolutionary and Napoleonic France and to compare the behaviour of captor Powers a century and a half ago with that of recent years.

Soon after war broke out in 1793, Britain began to accumulate French prisoners of war—mostly from prizes taken at sea. As there was a lack of suitable accommodation for them, it was decided to fit out a number of old warships as prison hulks, which were moored in the principal naval ports, chiefly at Portsmouth, Plymouth and Chatham. At first the hulks were used simply as prisons, being cheap to provide and maintain and easy to guard, but as the number of captives increased, depots had to be formed ashore and the prison ships became more and more to be used as collecting camps which received prisoners as they arrived at the naval ports and later passed them to the camps ashore. This process was accelerated from about 1800 onwards when the threat of invasion made it desirable to remove prisoners away from the naval ports on the South coast.

Life in a prisoner of war camp in England was undoubtedly hard. The captor nation was responsible for providing accommodation and rations, while clothing and blankets were supposed to be found by the prisoner's own Government. The rations were certainly adequate in quantity and up to the usual contemporary standards of quality, though little attempt seems to have been made to allow for national idiosyncracies of diet. Thus, French prisoners sometimes complained that they got insufficient bread but more than enough beef, while Britons in French prisons disapproved of French wine as a beverage and demanded more meat.

In the early days no attempt was made to give the prisoners any useful occupation or means of earning money to purchase small comforts. The result was an outbreak of gambling in food and clothing which often led to the losers being brought to the point of death by starvation or exposure. Later, however, well-behaved prisoners were encouraged to work at their trades, and this wise measure undoubtedly did much to check riotous conduct and to improve the prisoners' lot.

Each beiligerent appointed an accredited agent who was permitted to live in the hostile Country and to move about freely. His duties were to do his best for his nationals and to arrange for the supply of their clothing and other necessaries. The agent also arranged for the exchange of prisoners by cartel ships, which sailed under a flag of truce and were secure from molestation by warships of either belligerent.

A large proportion of soldiers and sailors actually captured during the early days of the war never reached a prison camp at all. By a long standing custom it was usual when a fortress or overseas colony surrendered by capitulation to include in the terms an arrangement by which the garrison was shipped to its own Country, usually at the expense of the captors. Sometimes such repatriation was unconditional,

<sup>&</sup>lt;sup>1</sup> A Diplomatic Conference opened at Geneva on 21st April, 1949, to examine the text of proposed amendments and additions to the International Convention on the Treatment of Prisoners of War, adopted by fifty governments at Stockholm in August, 1949.

but in most cases an undertaking was given that the released personnel should not serve again for a stated period or until regularly exchanged. Thus when Minorca surrendered to the French in 1756, the whole British garrison was immediately embarked on board French transports and sent to Gibraltar for onward passage to England. By this eminently sensible and humane custom much misery was avoided without detriment to the interests of the captors.

Officers were always treated with consideration and were often exchanged almost immediately after capture. Sometimes an officer would be permitted to return to his own Country in order to arrange his own exchange, on the understanding that if his efforts were unsuccessful he would voluntarily return to captivity. It was very seldom that such undertakings were not scrupulously observed. In any case, officer prisoners of war were usually permitted to live as private citizens on giving their parole, though their place of residence was fixed and their movements to some extent restricted.

Despite revolutionary fervour and the issue of orders in 1793 that no quarter was to be given to British troops, the French Government generally observed the normal customs regarding prisoners of war which had gradually developed over a long period prior to 1793. An exception was made, however, in the case of French emigrés who were captured under arms and in British pay. Such unfortunates were either butchered at the time of capture (as at Nieuport) or were shot after a swift trial by court martial (as at Quiberon in 1795). Exchanges of prisoners of war were, however, arranged, and cartel ships plied regularly between Morlaix and Plymouth. In neither Country could prisoners complain of deliberate bad treatment by the captor Government, though there were a number of cases of individual brutality, and the French gendarmes appear to have acquired an evil reputation in this respect never shared by the Army and Navy of the Republic. Some individual cases of ill treatment of prisoners also occurred in England and were dealt with by courts martial.

Though the life of a prisoner of war was undoubtedly hard, there was one tremendous consolation—the hope of exchange. Exchanges were indeed regularly carried out, for all Governments much preferred to have their own soldiers and sailors back in service and wished to avoid the considerable expense of feeding, housing and guarding alien prisoners. By 1804, for example, Britain was paying over £260,000 a year for her prisoners of war. It was therefore normally in the interests of all parties concerned to effect exchanges, and rules for such transactions had become generally accepted by the leading Powers.

The situation altered for the worse very shortly after Napoleon assumed the supreme power in France as First Consul in December, 1799. At that time Britain held 300 French officers and 30,265 other ranks and ratings as prisoners—a far larger total than that of British prisoners in French hands. Napoleon at once began to make difficulties over exchanges, demanding the right to repatriate Hanoverians and (later) Spaniards against equivalent numbers of Frenchmen in England. Negotiations dragged on, but finally broke down in 1804, when it became obvious that France had no intention of allowing exchanges except on her own terms. Even then the treatment of prisoners in both Countries continued to be reasonably good by contemporary standards and were even in some respects improved.

In 1803, when Tobago and St. Lucia capitulated, the British agreed to send the surrendered garrisons to France on the condition that they would not serve again until regularly exchanged. Napoleon refused, however, to ratify the terms or to return British prisoners in exchange. Six years later the garrison of Martinique was

sent back under similar conditions, but the terms were again repudiated by the French Government and the unfortunate men had to be sent to British prison camps. On one occasion cartel ships were actually fired on when about to enter Fécamp harbour to repatriate prisoners. There was another attempt to resume regular exchanges in 1810, but this also failed owing to the Emperor's uncompromising attitude.

The breakdown of the long-established system for the exchange of prisoners of war undoubtedly caused great bitterness on all sides, and introduced an entirely new outlook on the whole question. Up till then, for example, acts of gallantry performed by prisoners were normally rewarded by freedom. Thus a Frenchman, who dived into Plymouth harbour from a prison hulk to rescue a British sentry who had fallen overboard, was immediately released and sent back to his own Country. Similarly, a party of prisoners who acted most gallantly in fighting a fire at Andover were all released without exchange. On Christmas Day, 1804, the British seamen and marines guarding Dutch prisoners at Chatham voluntarily handed over their extra allowance of beef and beer to their charges as an expression of their appreciation of the humanity and kindness shown to the shipwrecked crew of a British warship lost off the Texel; the British officers provided a similar special dinner for the Dutchmen on New Year's Day. There was indeed very little animosity shown towards prisoners of war by the inhabitants of any of the European belligerent Powers.

For almost a century after Waterloo there was no major European conflict to raise the prisoner of war problem on a large scale. Nevertheless attempts were made by international conventions to obtain some measure of general agreement on the treatment of captives in time of war. The agreements finally reached were by no means precise in detail nor were they universally accepted in all respects, but they did consolidate and adapt most of the features which had previously only been recognised by chivalrous custom. The accredited agent of 1793 disappeared, to be replaced as welfare supervisor by the Protecting Power and by the Red Cross Society.

The treatment of prisoners in Germany during the 1914–18 War revealed the shortcomings of these international agreements. Prisoners were often forced to work on unsuitable tasks and were treated with a brutality which shocked the civilized World. Rations were totally inadequate, but the German Government took the attitude that, in the face of the Allies' blockade, prisoners could not expect to get better rations than did the captor's own civilian population. However, after lengthy discussion, some exchanges were arranged of prisoners who were incapacitated from further military service by age or wounds, and eventually food parcels for prisoners were delivered through the agency of the Red Cross.

The experiences of that war showed how much yet remained to be done if reasonably humane treatment was to be secured for war prisoners in the future and, in 1929, another international convention agreed on fresh rules. This code was eventually ratified by 47 Countries, and it was hoped that the horrors of the 1914–18 War prison camps would never be repeated.

The 1939–1945 conflict showed how illusory were these hopes, for the treatment of prisoners reached new depths of brutality and sheer savagery. Prisoners were openly butchered in cold blood, were forced to labour on military works, were deprived of mail and Red Cross parcels, and were starved and tortured in the most revolting fashion. Only small scale exchanges of totally unfit men were eventually arranged, and the Protecting Power was continually flouted in its efforts to obtain better living conditions. It may be noted that the old custom of recruiting from the

prisoner of war camps still persisted, as it had in Napoleonic times, though to Russia fell the distinction of introducing the organized political indoctrination of captives on a large scale.

A comparison between the conditions under which prisoners were held captive during the Napoleonic wars and those obtaining in Germany, Japan and Russia during the late war reveals a progressive change for the worse, which runs exactly parallel to the progress of dictatorship from Napoleon, through Kaiser Wilbelm to Hitler and Stalin. It would also appear that the nearer the dictator is to being a professional soldier, the less brutal is his treatment of prisoners of war. Twice have international conventions attempted to codify and enforce a reasonable standard of treatment of war captives, and twice has failure been recorded. It is against this depressing background that yet another attempt is being made to ensure that in any future war prisoners will be treated at least with no less humanity than they were a century and a half ago. It is indeed a sorry story, and one in which mankind can find little comfort.

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# THE ARMAMENT OF MODERN INFANTRY

By Colonel R. V. Shepherd, O.B.E.

N order to come to any conclusion on the best weapon for modern infantry, it is useful to look at the whole question historically and see by what means they have acquired their present varied assortment of arms.

Until the end of the XIXth Century, infantry armament presented few problems. They graduated through various types of muskets and bayonets to the rifles of to-day. The new Century brought the machine gun into greater prominence. Even so, the beginning of the 1914–18 War saw the armies mainly armed with the rifle and bayonet and with but few machine guns per battalion to increase their fire power. During the course of this war and partly as the result of trench warfare, machine guns were brigaded and in some armies formed into a separate corps. Their function was still to give increased and sustained fire support. Infantry units received a varying number of light automatic weapons as a further addition to their fire power and sniper's rifles to deal with specific targets.

Examining the armament of the infantry during the late war, there is one outstanding fact—the number of different weapons which the unfortunate infantryman had to master. What were these weapons? The revolver for close quarter use, the machine carbine for street fighting and raids, the rifle for field work, and the light machine gun for longer ranges and sustained fire power. The infantryman might also have to learn to use an automatic rifle, a sniper's rifle, medium and heavy machine guns in ground and anti-aircraft roles. His spare time could be spent learning to handle anti-tank weapons, mortars, grenades and grenade throwers. Regarded for generations as inferior in technical ability and only of use with a rifle and bayonet, the infantryman was suddenly faced with the need to master a greater variety of weapons than any other branch of the Army.

Could they be mastered by conscripts and men hurriedly trained in wartime? The answer is certainly "no," despite a multiplicity of schools and instructors. The short time available before they must be sent into the battle line precludes anything but a superficial knowledge being acquired.

To appreciate how this array of armament came about it is of value to consider each weapon very briefly.

## INFANTRY WEAPONS IN THE 1939-45 WAR

The Revolver.—A handy weapon, easily carried and effective against personnel at very short ranges. A relic of the Wild West and the days of forming squares to repel charging natives armed with spears. In trench warfare perhaps of some little value. To-day it gives a sense of protection in rear areas and the modern automatic is easily carried. Rarely fired in training and even more rarely in anger. Training in its use is perfunctory and only in the hands of the enthusiast is it really accurate.

The Machine Carbine.—Rightly called a gangster's weapon. Light, handy capable of considerable fire power. A deadly weapon in street and house fighting and at ranges up to 100 metres. Beyond this range it is of little value owing to its inaccuracy in automatic fire and to the low muzzle velocity of its pistol type cartridge. Valued by airborne troops and commandos for its ability to develop a large volume of fire and for its portability and handiness. Its mechanism is generally simple and men can be trained very quickly in its use and maintenance.

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The Rifle.—The standard weapon of the infantry soldier for over 200 years and still so regarded in many armies. The weapon which in past years he was trained to handle with skill and accuracy up to ranges of 600 metres and more, and also to develop a respectable rate of fire. To-day regarded as a weapon to be fired only at ranges up to 300 metres and as a useful support for a bayonet for the alleged purpose of terrifying the enemy or for ceremonial use.

Simple and easy to maintain, yet its effective handling requires long training and constant practice.

The Light Machine Gun.—Originally came into prominence in the 1914–18 War and was in the following years developed into a very robust weapon, comparatively light, free from mechanical troubles and capable of a very high degree of sustained fire. Its mechanism is fairly simple and therefore easily taught.

It became the main armament of the infantry, two being allotted in most armies to each platoon. With them, the platoon could develop with considerable accuracy a concentration of fire on suitable targets up to ranges of the order of 1,000 metres. The command of them and their ammunition supply require the services of half the platoon, who do not use their own weapons except in emergency. Such a platoon can develop a rate of fire of about 600–800 rounds per minute, and the use of men as ammunition carriers can be considered as justified.

Automatic Rifles.—Have in recent years been adopted by many armies (except the British) and were designed to replace the normal magazine rifle. Their justification is that their automatic feed reduces fatigue and enables a higher rate of fire to be maintained. They abolish the need for a high degree of training in bolt manipulation. They are easy to fire and enable the rifleman to develop a rate of two to five times that obtainable by a manually operated bolt rifle. The modern automatic rifle, though somewhat heavier than the magazine rifle, is robust and reliable. The mechanism is more difficult to learn.

A weapon which not only renders the magazine rifle obsolete but could replace other infantry arms if a better alternative were not possible.

Sniper's Rifles.—These do not affect the main fire power of the unit. They are designed to deal with special targets which demand a very high degree of accuracy. Fitted with special sights they are suitable only for use by highly trained marksmen. Their special role will, no doubt, exist in future wars for some time to come.

Medium Machine Guns.—Originally gave the infantry a considerable increase in fire power at comparatively short ranges. During the two Wars their use was developed to enable them to engage targets at 2,000-3,000 metres and their main role to engage the enemy at these longer ranges. Occupying at the beginning of the late war a dominant place in the infantry fire plan, their subsequent career was varied. Discarded at one time as unnecessary owing to lack of suitable targets, or on account of terrain, they were on occasion hurriedly brought back in certain theatres of war where the need for weapons that could engage targets at long ranges became evident.

Rather heavy, but robust and free from stoppages, they could be relied upon to develop heavy sustained fire for very long periods. Under modern conditions of war regarded as at least obsolescent if not obsolete.

These are the main weapons of the infantry against personnel. Anti-tank and A.A. weapons and grenades have been mentioned as weapons that have to be

understood by the infantry. They each have their specific task in general against material but it is not proposed to discuss them here but to confine the question to the fire power of the infantry against personnel.

## THE MODERN OUTLOOK

It will be seen that the weapons described are intended for use against personnel at ranges varying from the 5-10 yards of the revolver to the 2,000-3,000 yards of the medium machine gun. For each weapon a good case can be presented. Strong arguments for retaining each and every one can be put forward, and only if a weapon can be produced that will fulfil two or more roles is there any sound reason for abolition of some of these weapons.

Modern military thought still demands that the infantry shall be able to develop a large volume of fire. There is, however, one important change in to-day's ideas—the ranges at which the infantry is expected to engage the enemy effectively have been much reduced. No longer is the rifleman expected to shoot accurately at 600 metres; 300 metres is now his firing range: no longer are light machine guns expected to take on targets at 1,000 metres or more, and the medium machine gun is not even required.

In these shortened ranges of 300 metres for the rifle and 600 metres for the light machine gun lies the hope of being able to replace two or more of the existing infantry weapons. There is one very important proviso and it is that a suitable cartridge is available or can be designed. The pistol type cartridges of the revolver and machine carbine are unsuitable for ranges above 100 metres, owing to their low muzzle velocity and poor accuracy beyond this range. The rifle cartridge is too powerful and ranges too far though giving good accuracy and a flat trajectory—both important considerations.

There is a middle course between these two extremes. The Germans towards the end of the War had achieved something that was very close to being the right answer, if not the answer. By cutting down their 7.92 rifle cartridge and fitting a lighter bullet they produced a short light round, which, combined with a new weapon, gave their infantry a vastly increased ability to develop a large volume of fire for a much smaller man-load. This question of ammunition is discussed later, but assuming the possibility of such a cartridge what is the effect on the weapons of the infantry?

A weapon can be designed round such a cartridge that will effectively replace the machine carbine and the magazine rifle, and render unnecessary the equipment of platoons with light machine guns and/or automatic rifles. This still leaves the sniper's rifle and the revolver as infantry weapons. Both, though of minor importance, will still be needed—the sniper's rifle for special targets, and the revolver, or preferably the automatic pistol, for the use of troops in back areas.

The new weapon, weighing about 3-4 kilograms would have the appearance and many of the characteristics of a machine carbine. Using the compromise cartridge, it would have effective single shot accuracy up to 300 metres. Capable of automatic fire, it could thus fulfil with ease the present roles of the machine carbine, magazine and automatic rifles.

In the light machine gun role it must be able to fire single shots and short bursts with reasonable accuracy up to 600 metres. Fitted with a bipod which can be carried in the pocket when not required, this standard of accuracy could be attained, especially if a longer barrel is fitted. But in this role it should be capable of sustained

fire. In this respect there is no question that it could do this as effectively as the modern light machine gun. If however the fire power of the platoon is considered, then comparison is possible. The fire power of a platoon of thirty men is about 600-800 rounds per minute using its two light machine guns and rifles. A platoon armed entirely with the new weapon could develop under the same conditions a rate of 3,000-4,000 rounds per minute. This could be only for a short time but, if only one-third of the weapons were firing, then the effective fire power would be roughly the same as the platoon with its two light machine guns and rifles. Thus by careful fire control, sustained fire could be maintained for some minutes without serious heating effects.

It has already been stated that such a weapon cannot in a sustained fire test approach the standard of the modern light machine gun, it can however be claimed that, within the limits of the ammunition available in the infantry unit, these new weapons could maintain the fire power of the platoon until such ammunition is exhausted. A higher performance is unnecessary.

Armies are notoriously conservative, and in many quarters there will be a strong inclination to retain the light machine gun. In this event, the answer is to provide the new weapon with a heavier barrel capable of greater sustained fire. Such a weapon would weigh about a kilogram more but still be lighter than the present light machine guns. It would have one great advantage in that its mechanism would be the same as the platoon weapons. Technical instruction in it would be identical, and spare parts common to both. From a production point of view, the only difference would be the manufacture of heavier barrels and bipods.

There is thus every possibility of replacing some of the infantry weapons with one new design provided there is a suitable cartridge. The dividends from such a policy are considerable—simplified and more thorough training, production of one weapon instead of several, and an ammunition supply problem both in the field and in production reduced to a standard calibre. For the Western Union, the advantages need no stressing—the first step to standardization, common weapons and common training.

### AMMUNITION

It has been said that the solution depends on the cartridge, and that existing types are too weak or too powerful. It is of interest to look at the figures for existing cartridges:—

Cartridge The 9 mm., used in pistols and carbines			Muzzle Energy				
			60 kgm.		( 434 ft./lbs.)		
The .30 American Carbine	***		120	,,	( 868	**	)
The 7.92 Short German	***		200	33	(1,445	,,	)
The .303 British Rifle		***	335	99	(2,430	**	)
The 7.92 Mauser	***	***	370	99	(2,680	.33	)
The .30 American Rifle	***		360	**	(2,590	**	)

The figures are most interesting, the extremes being the 60 kgm. (434 ft./lbs.) of the pistol and machine carbine, and the 370 kgm. (2,680 ft./lbs.) of the 7.92 Mauser cartridge. Taking the mean of these two gives a figure of 215 kgm. (1,550 ft./lbs.). Will such a cartridge give the performance necessary for modern warfare? On the performances at present required, it will certainly do so, and it is interesting to note

that the short German cartridge developed during the War is very close to this figure. 1

Much is known of the capabilities of this cartridge. It can be faulted by the expert as having too light a bullet but its performance is good, and with a barrel of standard length develops a muzzle velocity comparable with many rifle cartridges. It has the advantage of being very short—not much longer than the 9 mm. cartridge, and is much lighter than the rifle cartridge—merits which do not require enlarging upon.

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The powder charge is of the nitro-cellulose type—a powder that is made and used by most Countries except Great Britain, which still persists in making cordite. Nitro-cellulose or cordite may be the powders favoured to-day, but it cannot be doubted that in America at least the development of new powders continues and will continue. It is more than probable that to-day a powder can be obtained that will give greater power for less bulk and be cooler—all advantages of importance.

The American .30 Carbine is considered in some quarters to be the answer. It is certainly a light and handy weapon and large stocks are believed to exist. But the performance is not good enough for a universal weapon. The cartridge is of pistol type with a bullet of indifferent ballistic shape, which was proved in the late war to have insufficient penetrating power to reach an enemy taking cover behind even small trees. Its accuracy at the longer ranges is also indifferent.

### **ECONOMIC CONSIDERATIONS**

A strong case can undoubtedly be made for the retention of the present infantry weapons mainly on the grounds that large stocks exist in certain Countries and that the advantages of a new weapon are not such as to justify the cost when money is scarce and required for other types of armament.

The existence of large stocks in certain Countries cannot be denied and it is these Countries which may oppose a change. But the picture that must be looked at is the Western Union. The first essential for this Alliance to be effective is common weapons (and from this follows common training). Many of the Powers in the Western Union are armed with a miscellaneous collection of British, American and other weapons for which they must buy or manufacture varying calibres of ammunition. This situation has endured for nearly four years. The Countries concerned have been very patient, but the situation is fantastic and cannot continue. They must adopt new weapons, which can be manufactured possibly in their own Countries. For them this course would be an economy, both in production and in training. Unless there is a decision soon, there is a danger that they will adopt not only weapons of a different type to their neighbours, but each may choose a different calibre. That would be fatal to any hope of standardization of weapons and for ammunition.

### STANDARDIZATION

The time has come when the Western Powers must make a decision either individually or in concert. To achieve standardization the existence of large stocks in certain Countries must be disregarded. If these were large enough to enable all

¹ It is worth noting here that this cartridge was the standard Mauser cartridge cut down to the shorter length and the calibre of 7.92 retained. Forced upon them no doubt by wartime necessity it has advantages from a production point of view—existing cartridge making plant could be used without altering all the tooling; barrels only need a shorter chamber; rifling conditions being unaffected.

of the Western Union Countries to be armed with the same weapon, then there could be no sound case for a new weapon.

But are these stocks so vast that they can supply the whole of the Western Union? Not only for peacetime armies but for those armies on a war footing. Or would new manufacture of these same weapons and ammunition have to be undertaken to fulfil requirements? Such a policy would kill all hope of standardization, perpetuate a multiplicity of arms and types of ammunition and contribute nothing to reducing training instruction or improving skill at arms.

There is an opportunity to-day—and it has existed for nearly four years—an opportunity that has never been possible before, to permit the Western Nations to possess common weapons. Is it to be allowed to pass in order to use up existing stocks of a varied character? Surely the answer is to use those stocks where standardization is not so vital, to produce a new weapon for immediate manufacture by and for those Countries so urgently needing them. For the nations already equipped and with ample stocks it could be their policy to adopt the new weapon not for immediate manufacture but to replace in due course their present stocks or in the event of war.

The weapon selected must be capable of being made in many Countries and not only in America and Great Britain. Nations for national pride and to keep alive and maintain the art of manufacture must be able to supply some if not all of their needs and those of neighbouring Countries who do not make their own weapons.

Of even greater importance than the standardization of the weapon is the need for a common cartridge. Such a cartridge does not; as some consider, involve the building of new factories, providing new plant, etc. New tooling only would be necessary for the cartridge. As to the powder, the use and manufacture of nitrocellulose types is widespread even in cordite-minded Countries. These latter had to load nitro-cellulose powders and to import large quantities for 9 mm. ammunition and other calibres.

It was suggested earlier in this paper that there might be the possibility even to-day of a better powder—more powerful for less bulk, and cooler. Is the great advantage of such a powder to be denied because it will require making? Black powder and muzzle-loaders had their day but to the end had their fervent advocates.

This article has endeavoured to give an unbiased picture of the requirements of the infantry so far as the personal weapon is concerned, looking at the problem not from the point of view of any particular armament firm or any particular nation but as the problem of arming the infantry of the Western Union. Provided a weapon is produced that can fulfil these requirements it is immaterial which firm or Country is responsible for the successful design. The vital need is a common weapon and even more imperative—a common cartridge. This latter must not be out of date, but a highly efficient short cartridge around which new weapons can be built. To design a weapon for an obsolete cartridge is a course that cannot be justified. To perpetuate obsolete ammunition is equally foolish.

With a weapon as described combined with a new short cartridge, the infantry of the Western Union would have a lighter load for a greater fire power, standardization of equipment and common training. Without it, there will be perpetuated a number of obsolete weapons for which ammunition and spares must be made in peace, and in war will be inferior in performance.

Many highly technical arguments can be produced in favour of each and every type and design. In the last thirty years many excellent light machine guns have been produced and used. Some automatic rifles have also been made in considerable quantities. In the magazine rifle class decades of development have standardized about three major designs, the best known probably being the Mauser. There are many machine carbines to choose from.

At one end of the scale there is the light machine gun weighing from 9 to 15 kilos (20 to 33 lbs.) and firing a cartridge with a muzzle energy of about 300 kgm. (2,170 ft./lbs.) and having an effective range of more than 2,200 metres (2,500 yds.). At the other end is the machine carbine weighing 2.5 to 3.25 kilos (6 to 9 lbs.) and firing a cartridge with the low muzzle energy of 60 to 120 kgm. (430 to 860 ft./lbs.) with an effective range of not more than 100 metres (110 yds.) except in the case of the American carbine M.A.I. which is somewhat greater.

Broadly speaking the problem is very simple. Is the weight and size of the light machine gun plus a high powered cartridge required by modern infantry tactics? Has the machine carbine with its low muzzle energy cartridge any place in to-day's infantry equipment. Can four weapons be replaced effectively by a new design?

### NOTE

"The work on standardization which has been going on in the three Countries (the United Kingdom, the United States and Canada) concerned for over two years has been mainly of exploration and discussion . . . agreement has now been reached on a plan for the development and testing of material of 'common interest.' This stage will be marked by the exchange of technical observers. The aim is common designs and standards in arms, equipment and training methods, but it is expressly stated that this development will be gradual . . What makes the task of standardization so difficult is that so much war material is also related to the goods produced in far greater abundance for the civil population of the particular Country. In many cases military standardization would have to be preceded by civilian standardization."—The Times of 28th December, 1949.

As the principal supplying Power of the North Atlantic Pact combination, the United States must be expected to have a large say in the standardization of weapons, including small arms.—Editor.

# THE ADMINISTRATION INCUBUS THE NAVAL SYSTEM—A COMPARISON

By LIEUT.-COLONEL G. W. Ross, R.M.

HERE has been some discussion recently, in the pages of the JOURNAL and elsewhere, of the undue proportion of his time and energy that a regimental officer has to spend upon Unit Administration. It has been suggested that units should be allowed a centralized staff to deal with pay, clothing and documents, such perhaps as is provided in major units of the Royal Navy by officers and ratings of the "S" (Supply and Secretariat) Branch, and by ratings of the Regulating Branch.

The administrative systems of both the Navy and the Army have been developed by experience to meet the special needs of their Services. In war the Army system has proved efficient, and it is probably the return to peace conditions which causes criticism. Not only do these conditions bear more heavily on Company Commanders who, unlike their pre-war predecessors, have not been brought up to them, but the Company Commander of to-day has to educate his subordinates as well as himself to the less flexible requirements of peace-time administration. Thus it is natural for him to cast an envious eye to the naval system which seems to provide for many of these irksome duties to be performed by professional administrators.

The purpose of this article is to outline the distinctive features of the naval system of unit administration and to consider whether any of its methods could profitably be adapted to suit military requirements, particularly in peace-time. In what follows, the naval unit is taken as a big ship—battleship, aircraft carrier or cruiser—for comparison with an Army unit. It should be remembered, however, that a ship of this size is considerably more independent than a battalion, which relies on brigade or division for many of the technical services available within a ship's organization. A ship's company is organized in divisions which are comparable to an infantry company although they vary greatly in size up to about 120. The divisional officer is a Lieutenant or Lieutenant-Commander and may have one or two assistant divisional officers, but there is no sub-division comparable to the platoon, and the total officer strength of the division is less than that of the company.

## THE "S" BRANCH

The Supply and Secretariat Branch is composed of officers trained in all the duties of the Branch, of every rank from Vice-Admiral (S) to Midshipman (S), and of Branch Officers (formerly known as Warrant Officers) and ratings specialized in either writer, supply, stores, cook, steward or catering duties. A large number of them gain experience of staff work at an early stage of their career by serving in the Secretariat of a Flag Officer. A description of this part of their duties is outside the scope of this article, but it is worth noting that it has no equivalent in the Army.

<sup>&</sup>lt;sup>1</sup> "Administration and Training: the Company Commander's Problem," in the JOURNAL of May, 1948, and "The Administration Incubus" in August, 1949

<sup>A letter in Correspondence in the JOURNAL of November, 1949.
Royal Marine detachments in H.M. Ships are administered on similar lines to seamen divisions, although there are certain traditional differences. Royal Marine administration ashore approximates to the Army system.</sup> 

The "S" Branch in a typical cruiser or aircraft carrier is represented by :-

- (a) The Supply Officer, usually a Commander (S), who is in general charge of the department, with the special duty of accounting for pay and allowances, stores, provisions and clothing.
- (b) The Deputy Supply Officer, a Lieutenant-Commander or Lieutenant (S), who assists the Supply Officer with all his duties, but often has delegated to him the particular task of storekeeping;
- (c) The Captain's Secretary, usually a Lieutenant (S), who in addition to handling official correspondence, deals with men's personal papers or documents, drafting, promotion, and the documentation of the more important disciplinary matters:
- (d) In the bigger ships, three or four Branch Officers and Midshipmen (S), each of whom works in one particular section of the department; and
  - (e) The necessary ratings.

All these officers and ratings, in addition to their administrative duties, have their places in the fighting organization of the ship.

## THE REGULATING BRANCH

The R.N. Regulating Branch consists of specially selected ratings trained mainly for ships' police duties but, as will be seen below, they carry out much of the routine administration of personnel. They also provide postal services. In a large cruiser or aircraft carrier there will be a Master-at-Arms, two or three Regulating Petty Officers and three or four Leading Patrolmen.

### ADMINISTRATION

Let us now see how the various administrative tasks are performed in one of H.M. Ships and compare the system with that in an Army unit.

Discipline.—A man alleged to have committed an offence is immediately charged before the Officer of the Watch, who hears the evidence and either dismisses the case, exercises his own power to award the man two hours extra work if the offence is a trivial one, or places the offender in the "Commander's Report" and, if necessary, under arrest.

It is the responsibility of the Officer of the Watch to present the case to the Commander, and he will therefore satisfy himself that the charge is correctly worded and that all the necessary witnesses are listed.

The handling of the case now passes to the Regulating Office—the headquarters of the ship's police, who produce the accused and a fair copy of the charge at the Commander's table the next day, having warned the Officer of the Watch and the witnesses to attend. Meanwhile the accused's Divisional Officer, corresponding to the Company Commander in the Army, has been informed of the case and comes to watch the interests of the accused and give evidence of character if required.

The Commander possesses delegated powers of punishment rather greater than those of a Company Commander. If he remands the case for disposal by the Captain the subsequent procedure, whether or not it leads to a court-martial, is somewhat similar to that in the Army, except that all the legal and clerical work involved is done by the Captain's Secretary. Even if the Commander punishes the man, the necessary entries on his documents are made in the Captain's Office.

Here, then, is one example of centralized handling in the Navy of a matter which is largely a Company responsibility in the Army. But the Army system is better suited to conditions ashore, and is rooted in tradition, so that few would wish to suggest any centralization in this field. Incidentally, the Divisional Officer has to spend much longer attending Commander's Defaulters than the Company Commander takes to dispose of his own cases.

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Requests and Complaints.—When a rating has a request to make or a grievance to state he sees his Divisional Officer, whose responsibilities in this field are identical with those of a Company Commander. Any questions which the Divisional Officer cannot settle are referred to the Commander or Captain according to the nature of the request. For instance, the Commander sees all men who ask for special leave.

The issue of leave tickets and ration cards is the task of the Regulating Office. Railway warrants are kept by the Captain's Secretary and issued by him in accordance with particulars supplied by the Regulating Office. Thus the Divisional Officer, while remaining fully responsible for studying the personal needs and problems of his men, is relieved of mere paper work which would add nothing to his knowledge of them. There seems to be no reason why the peace-time desk work of a Company Commander should not be reduced by a similar arrangement.

Pay.—Major naval units are self-contained with regard to pay. Except for the payment of allotments and ratings' marriage allowance, which the Admiralty undertakes, the Supply Officer accounts fully for the pay of every officer and man borne in his ship. Since men's documents are also carried in the ship there is no need for Part II Orders. Changes in rate of pay, allowances, etc., are authorized in the Captain's handwriting in his "Request and Alteration Book," the Divisional Officer being responsible that men are brought forward as they become entitled to increases.

Officers are paid monthly, against their signatures, and the ship's company is paid fortnightly, witnessed by Divisional Officers. For casual payments, Saving Bank transactions and declaring allotments, men attend personally at the ship's pay office. Before a rating can stop or reduce an allotment to a dependant, however, he must appear as a Requestman before the Captain.

The Divisional Officer therefore has hardly any of the pay duties which take so much of the time of a Company Commander or his second-in-command. If a rating has any questions to ask about his pay, he can obtain the answer from an expert with the ledger in front of him. There is no need to detail an imprest officer, and the Captain has the confidence given by the knowledge that his accounts are in the hands of an expert.

There are objections to the introduction of a similar system in the Army in war-time. It would require a trained accountant officer in each unit, responsible both to his Commanding Officer and to higher departmental authority for the correctness of cash and ledgers; ledgers could obviously not accompany a military unit engaged in operations, and it is desirable that regimental officers should accustom themselves in peace-time to pay duties for which they will have some responsibility in war. Merely to centralize the present form of peace-time regimental pay duties at unit level would be open to the last objection, without achieving anything like the convenience of the naval system, whose essential element is the Supply Officer, completely and finally responsible for the accounts of the unit in which he serves. Nevertheless in peace-time a trained accountant officer in charge of the imprest would be a useful addition to a battalion.

For detached parties the Navy can, and does on occasions, use the pay book and acquittance roll system, the accounts being kept by the Supply Officer at some convenient base, but this is the exception rather than the rule. Even supposing, therefore, that it were thought desirable to release the Company Commander from his responsibility for looking after his men's pay, it seems that technical difficulties would prevent the Army from enjoying many of the advantages of the naval pay system.

Records, Drafting and Promotion.—A sailor's official documents are held by the Captain's Secretary, but a very comprehensive summary of the man's history and qualifications, called a Divisional Record Sheet, is kept by his Divisional Officer. It is the duty of the latter to ensure that application is made at the right time for good conduct badges, etc. The award, when it is made, will appear in the Captain's Request Book, which is sufficient authority for entering it in the man's official documents as well as in the pay ledger. Changes in a man's personal particulars, such as marriage, birth of children, etc., are reported by the man himself to the ship's pay office for entry in the ledger. Pay ledgers are closed quarterly and forwarded to the Admiralty, where they are kept as a permanent record from which it is possible to reconstruct any man's official documents which may be lost.

For the purposes of drafting and promotion every naval rating belongs permanently to one of the four depots at Portsmouth, Devonport, Chatham or Lee-on-Solent, where "Port Divisional Rosters" are maintained by the drafting staff of the Commodore, Royal Naval Barracks. Changes in the particulars recorded in these rosters are reported as they occur by the ship's pay office, on a form somewhat similar to the Casualty Return used in the Army, except that a separate form is used for each man. Here again the Divisional Officer is spared some of the clerical work which falls to the lot of a Company Commander, but his responsibilities are much the same.

Messing.—The "S" Branch in a ship is responsible for the supply of provisions, and for catering and cooking for all ranks; that is to say it does what the Quartermaster, the Messing Officer and the various Mess Caterers do in the Army.

"Victualling" and "Checking" are the naval terms for taking men on and off the ration strength, and the task falls naturally to the Regulating Office, which in a sense controls all traffic in and out of the ship. This is the only difference between the naval and army messing systems which directly affects the work of the Company Commander. Nevertheless the fact that messing and the provision of rations are in the hands of an expert professional staff with an officer of its own Branch at its head does tend to make for higher standards. The formation of the Army Catering Corps appears to have been the reflection of this need. Another result is that the Executive naval officer has less contact and less knowledge of messing than the Army regimental officer.

Arms and Ammunition.—The undoubted versatility of the "S" Branch of the Navy does not extend to taking charge of Armament Stores. They are very firm about it, as the writer discovered during the War when he tried to persuade the otherwise enterprising Supply Officer of a certain amphibious unit to take over some interesting explosive novelties. Weapons, ammunition, explosives, anti-gas equipment, webbing equipment and steel helmets are accounted for in a major naval unit by the Commissioned Gunner, and maintained by Ordnance Artificers. There is no personal issue of weapons and equipment except anti-gas respirators to seamen, so the Divisional Officer is not concerned with arms inspections. On the other hand, he may be responsible for the efficiency and cleanliness of, say, a quadruple 14 in. gun turret, shell rooms and magazines, if that is what his division mans.

Stores.—The term "Naval Stores" covers most of the items which in the Army would be classified as Unit Equipment and Accommodation Stores. An officer of the "S" Branch is in charge of them, and his work is very similar to that of a Quartermaster.

Clothing.—Clothing comes under the heading of "Victualling Stores" in the Navy, presumably because, like provisions, the quantity required is directly proportional to the strength of the ship's company, and is expended at a more or less regular rate. The system by which each man receives a free kit on entry, and subsequently maintains it himself with the help of a Kit Upkeep Allowance, is similar in principle to that applied in the Army to personal clothing. In practice, however, there is less documentation required. The Clothing Store operates on a shop basis, so that men can buy what they want and what their Divisional Officer orders them to buy, for cash across the counter.

Accommodation.—The Commander is responsible for the cleanliness and maintenance of the ship and has at his disposal the necessary technicians and stores. This obviates any necessity of dealing with outside authorities such as the Garrison Engineer, but the work makes and always has made very heavy calls on the time and energy of the ship's officers and the ship's company.

There is no naval equivalent to Barrack Damage Contributions. Almost invariably, in fact, the living spaces in a ship steadily improve with occupation, as will be readily believed by anyone who has seen the state of a ship when it is commissioned after a refit. Moreover, there are few fittings on a messdeck capable of being damaged with anything less than a sledge hammer. Nor does the question of fuel and light scales arise in a ship.

Divisional Officers are responsible for their "part of ship," and this takes a good deal more of their time than the corresponding task of a regimental officer. It is difficult for barrack-dwellers to appreciate the enormous surface area which has to be kept clean in a modern ship. A space comparable in size to a barrack room would in a ship be sub-divided into several compartments carrying complicated fittings on their bulkheads, and including perhaps a dozen watertight doors and hatches, and almost as many ladders. If the task of keeping the ship clean is counted under the head of administration, then the Divisional Officer spends more of his time on administration than the Company Commander. Nevertheless, in his ship's duties, he is working with his men, training, organizing and supervizing their activities, exercising leadership, and not cut off from them by paper work.

### SUMMARY

As far as it is possible to generalize from the foregoing brief survey, it may be said that where any significant difference exists between naval and military unit administration, it lies in :—

- (a) The tendency of the Navy to centralize administrative work at unit level, and to permit ratings to deal directly with unit offices and stores;
- (b) Naval units having their own "S" Branch personnel to provide legal, secretarial, pay, stores and supply services in one department, under an officer senior enough to exercise a measure of financial control and so avoid interdepartmental formalities.

Of the two systems, the Army makes the Company Commander more directly responsible for all aspects of his men's well-being, but in either, the degree to which personal contact and leadership is exercised depends very much on the individual officer. The Army system gives the general duty officer more experience of the problems of feeding, paying and documenting his men, while the Navy's system reaps the advantage of leaving these matters to professionals. If the Company Commander could be relieved by a central office of some of the routine work of administration, he could devote the time saved to his training duties, where personal interest counts for so much. Like the Divisional Officer, he would still have to deal with the special cases, and to keep himself well-informed on everything affecting individual men's progress and entitlements. It is from these responsibilities, rather than from routine clerical work, that an officer gains knowledge and experience of these matters.

From the point of view of the soldier, accustomed to going to his company headquarters for everything he needs, centralization might appear to have little to recommend it. It is a fact, however, that the sailor gets remarkably quick and efficient service from his ship's Pay Office, Clothing Store, and Regulating Office.

### CONCLUSION

It appears that many of the advantages of naval unit administration are denied to the Army for three reasons:—

- (i) it has not been possible for Army units to carry their own pay accounts on active service;
- (ii) it has not been considered economical for specialized administrative personnel to be borne on the establishment of field units;
- (iii) it is not desirable to use in peace-time administrative methods which are very different from those required in war.

It would be interesting to take these last three statements one by one and consider whether they will always hold good. There is already a tendency for the unit to accumulate a specialized administrative personnel; for example, the battalion (higher establishment) has 26 non-infantry personnel attached. Perhaps the addition of an officer and a small clerical staff for imprest, documentation and similar work would be a logical progressive step. It would, however, be necessary to consider the career of the officers in this corps of administrators. A unit office on the lines of a ship's Regulating Office might undertake the preparation of railway warrants and ration cards, and a Clothing Store, operating on a shop basis, might be introduced. Readers may be able to devise other adaptations of the naval methods which have been outlined, or on the other hand, they may consider that even those suggested are inapplicable to an Army unit.

# ORGANIZATION AND PAY THEIR INFLUENCE ON THE ARMY'S MANPOWER

By Major A. C. Gray, The Argyll & Sutherland Highlanders

In 1855 a series of measures calculated to bring much needed reform to the British Army was started when the Guards, the Horse Guards, the Board of Ordnance, the Treasury and the Home Office were forced to disgorge their chaotic control of certain sections of the Army to permit of unified and permanent command of the whole by the War Office. Reformation proceeded apace until 1881, when in a tremendous climax and in the face of vehement opposition, Mr. Cardwell gave his name and his authority as Secretary for War to the introduction of the Cardwell system of grouping Regiments of Infantry. Thus was sounded the death-knell of the "private army," and no one wielded the clapper with greater enthusiasm than Garnet Joseph Wolseley.

In an age when dogmatism and conservatism ruled and paralyzed the Army, Wolseley stands out as a brilliant fighting soldier and administrator. He forced the abolition of the purchase of Commissions, introduced the first concept of management into the Army, reduced the period of service with the Colours, improved pay and above all fought to loosen the grip which the doctrine of the "private army" had established on the Army. Until 1855 the Guards were more or less subject to the Sovereign, the Cavalry and Infantry were under the War Office but under the Horse Guards for discipline, the Artillery and Engineers were under the Board of Ordnance, the Commissariat was under the Treasury, and the Militia under the Home Office. Commissions were purchased, Commanding Officers were compelled to find their own replacements in the event of casualties and desertions, changes in uniform were frequent and always at the expense of the officer, and the right to produce such high level policy, planning or direction as there was, was invariably the subject of acrimonious dispute between the political War Secretaries and the military Commander-in-Chief.

Wolseley was "agin" the creation of all forms of Army policy not common to the whole. The water-tight compartment was an anathema to him. In advocating the introduction of the Cardwell system his wish was to convert a collection of undermanned regiments into an Army. He lived long enough to see the machinery of his making in working order.

The basic qualities of his reforms are as sound to-day as they were nearly sixty years ago. The oil of two wars has maintained and improved the shining efficiency of the machine, but now, in 1949, the rust of post-war reaction is producing a corrosion which threatens to reduce the machine to the impracticable, disorganized bits and pieces it was sixty years ago. The cogs are slipping out of place and grinding away as separate entities. The "private armies" are being reborn. Comparisons are always described as invidious when they are unpalatable. Consider and compare, therefore, some facets of the Army to-day and as it was in the XIXth Century when reforms were so needed and so vigorously pressed by Wolseley.

## PRIVATE ARMIES

The first reform in 1855 (although this was before Wolseley was old enough or senior enough to enter the lists as an advocate of reform), saw certain Services begin for the first time to acknowledge the authority of the War Office. Prior to that they were controlled and directed by their own particular Head of Service.

There are Heads of Service to-day, ostensibly as advisers to the C.-in-C. or G.O.C. on matters technically peculiar to their respective Arms. These Arms are technical in composition, constitution and purpose, but are integral and fighting elements of the Army and subject to order and direction within the common administrative framework. It does not require position in high places or great powers of discernment, however, to observe an ever-increasing reluctance on the part of these Arms to swim in the same administrative channel as the rest of the Army, a tendency to do business only within the demesne of their own Corps or Arm, a parochial concept of the term "in the interests of the Service." A myopic regard is developing for the efficiency of a Sapper being posted only by Sappers, for a Gunner's staff aspirations to be encouraged only by Gunners, for Service Corps complaints to be considered only by Service Corps Officers. There are Commands at home and abroad where the Adjutant-General's branch never issues a single executive instruction about personnel of technical arms, where the Headquarters of these Arms have within their authorized establishment administrative and personnel officers for the sole purpose of undertaking tasks which should be done by "A" staff officers.

The normal "channel of communication" is a sound military axiom based on a system planned and perfected over many years, yet all too frequently advocacy of its qualities serves only to evoke ribaldry. Units receive tacit encouragement to circumvent its purpose—and the offenders are always the Corps and technical Arms—to such an extent that the normal staff branches at formation Headquarters would appear to exist only to deal with the Infantry.

There is too much direct control in the Army to-day, too much of "keeping it in the family" and too many potential "private armies." The clock is being put back and the hands are approaching dangerously near to 1855.

#### PAY

The second notable reform occurred in 1867 when the paucity of recruits caused a reluctant Parliament finally to grant an increase of pay to the soldier. Recruiting immediately shot up.

The situation is similar to-day, with this radical difference that increased pay has not served to improve enlistment. If the answer does not lie in offering financial inducement where is it to be found? Improved living conditions? Yes, it is a factor, particularly for the married soldier. Security of tenure? Yes, to a certain degree—the Army is still moving around a treadmill. There are others, but none is a major factor. The greatest single inducement which the Army can offer is to give to the recruit what he now lacks in civil life—an incentive to improve his mind, his body and his pocket.

The financial improvements so far introduced have approached, but not solved, the problem. In common with the sociological measures promulgated by the Government since 1945, they serve to guarantee a degree of economic security—the "fair minimum" of the Trades Unions. They have all the shortcomings of this system—apathy, boredom, lack of pride in the work of mind and body.

The "star" system for other ranks is an administrative failure in practice although sound in principle. As an Adjutant at the moment of its introduction and for eighteen months afterwards, this opinion is based on sad experience and not dogma. The system foundered on the rocks which have wrecked so many similar measures of a wider political nature. In attempting to raise the pay and prospects of combatant

Arms, such as the Infantry, the standards of other Arms were lowered to a degree that in no way compensated for such improvements as the infantry soldier might be considered to have gained.

Technical Arms, such as the Royal Engineers, have undoubtedly been hard-pressed to enlist sufficient recruits as a result of the loss of Corps pay. The position is, if anything, worse so far as attracting suitable officer material is concerned. The new qualification pay for officers does not go far enough. Having qualified in the manner prescribed for his own particular Arm, an officer must be content with his extra five shillings per diem—or four, or none at all, depending on the fluctuations of his temporary rank—until such time as he becomes eligible for his next substantive promotion.

The peace-time soldier, be he officer or man, should always be a student. His is a profession in which learning, both academic and practical, has an essential place and should never cease. He is a linguist, a mechanic, a diplomat, a scientist, a psychologist, an administrator and, with it all, a warrior skilled in the use of his weapons.

If we accept such a manifold composition, a greater degree of encouragement must be given by the Army to those who seek or possess accomplishments. For example, let us take as the first essential accomplishment the soldier as a craftsman of war. He must be competent in the weapons he handles and take a pride in that competency. He must strive of his own volition to improve himself. Be done with the "press gang" principle of "shanghaiing" him to a course—he should be clamouring to go: he will be, if there is an incentive to go. Select a number of courses, fairly long in duration, specify their importance to the Arms concerned and place a permanent cash value on the achievement of qualifying at such a course or courses in a way similar to the officer who qualifies at the Staff College. Thus a soldier who qualifies as an M.T. instructor or on a potential M.T. Sergeant's course at the Army Mechanical Transport School would be given an immediate increase of pay of, say, threepence per day, effected by a simple Part II entry quoting the School notification of qualification as the authority. The value of this is that he would be immediately sensible of his qualification and would not have to depend on the limited scope of promotion for the first visible indication of his prowess.

Similarly, what one might describe as extra-curricular subjects, could be dealt with in a like manner. The man who has exercised his brain and devoted his free time to the study of a language or to passing an Army Certificate of Education is an asset to any community. Reward him. Give the linguist an extra sixpence a day as a permanent reminder of his ability; re-examine him every two years if need be, but abolish the existing fleeting award of a lump sum of £10. Again, simple administrative action in the Orderly Room is all that is required to effect such increases of pay. The intricacies and inconsistencies of the "star" system are avoided. The standard demanded of qualification is common to the Army as a whole and not governed by the individual interpretation of Commanding Officers.

The better educated soldier of a technical arm will obtain a higher rate of pay by his own endeavours and not because of the badges and buttons he happens towear, but at the same time the infantry soldier, if he so chooses, can achieve just ashigh a rate of pay because the means of qualification are common to all.

This type of incentive pay should be additional to, and in no way a substitute for, normal increments of pay for length of service and promotion. All our geese cannot be swans—but they can be encouraged to be.

Although the points expounded so far have depended on the other rank for illustration, the same arguments apply, probably to an even greater extent, so far as officers are concerned. That all regular officers should be able to speak, or at least be understood in at least one foreign language should be the rule rather than the exception as is the case at present. There should, therefore, be a language qualification pay of, say, is a day for as long as the officer linguist serves, subject to periodic re-examination.

Similarly, it is essential that between periods of substantive promotion, officers should be given an opportunity of improving their pockets and their knowledge. A selected list of long courses, a reasonably high qualification in which would earn an increase in qualification pay, is one solution. For instance, an award of an increase of is, per diem to officers who qualify at a long administrative course at the School of Administration would do much to restore to the appointment of Adjutant the dignity and prestige it formerly held. The abolition of Adjutants' pay in 1946 was a psychological blunder, and must surely adversely affect the type of officer willing to undertake the onerous duties and responsibilities of this office.

On the same basis, and with the dearth of new officers for the Royal Engineers, Royal Corps of Signals, R.E.M.E. and similar technical Arms particularly in mind, the possession of a University degree or other specified professional qualification should carry with it a qualification pay increment of at least 2s. a day.

This would promote a much-needed attraction for the technically-qualified potential officer and at the same time enable an officer of any other Arm, similarly qualified, to enjoy equal rates of pay. Pay would thus be based on the knowledge and accomplishments of the individual and not on the technical background of an Arm.

## MANPOWER

Conservative and economic deployment of manpower is a problem with which the British Army has always been faced. In spite of the recent introduction of conscription, it is no nearer solution now than it was in 1881 when infantry regiments were amalgamated. Infantry is unfortunately the most malleable Arm for experimental manipulation in this respect. Under the Cardwell system it was reduced from a hundred regiments to fifty, and although the criticism was great the act was conclusive. To-day, sixty-eight years later, uncertainty about its future organization is as obvious as it is distressing.

Early in 1946, the basic organization of Infantry was contained in the Depot, a Holding Battalion, an I.T.C. of two Regiments and at least two Field Force Battalions. By the end of 1946, the Holding Battalion and the I.T.C. had disappeared and given way to a Grouped I.T.C. of three to eight Regiments, and one of the two regular Battalions of each Regiment found itself in that euphemistically-named condition, "suspended animation." The Depot remained.

There was a general post again in 1947, when the grouped I.T.C.s were abolished and replaced by Arms Basic Training Units built round the hard core of a regular Battalion with limpet-like additions representing other Regiments in the Group. The quietus was administered to the short-lived suspended animation system and instead, one Battalion of every Regiment was either amalgamated with the other or disbanded altogether. The Depot still remained.

There are now signs that even the A.B.T.U. is not a practical proposition. In at least one Group, the Irish, the A.B.T.U. Battalion has been withdrawn and

replaced by a composite training unit similar to the original Grouped I.T.C.s. The Regimental Depot has in the meanwhile assumed such a voluminous mantle of responsibility to the Territorial Army, the Army Cadet Force and kindred organizations with Regimental associations that its future position in the scheme of things seems assured.

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Whither then the Infantry? Four years have elapsed since the end of the War, and although the world political situation still makes deployment a matter of uncertain day-to-day planning, it would appear imperative that the basic organization of Infantry should now be established.

In the maelstrom of experimental reorganization which has taken place so far, the permanence of the Regimental Depot stands out like a rock. Let us then rebuild the Infantry framework, as it has always been built, on the Depot.

The old Grouped I.T.C.s were made up of companies representing each Regiment in the Group. There was a Major commanding, with a Captain as 2nd-in-command, and a permanent cadre of four Subalterns. The average intake to each Company was between twenty and thirty men, and at no one time were there more than 100 to 120 men in the Company.

This organization would fit perfectly into any Regimental Depot in the United Kingdom to-day. Reinforcing and holding would present no great problems with such a comparatively small number, the recruit would be introduced to the Depot as his Regimental home, and as an old soldier would return to it, and look forward to returning to it, as his one firm base in the homeland.

The links which have always bound a Regiment to its County, and therefore to the civilian population as a whole, would be rejoined, with the Depot as the soldering iron. God knows, the Infantry has become impersonal enough to those serving in it, but how much more so to the civilian whose goodwill and money is so essential to it and to the Army in general. Grouping, even on broad geographical lines, has done harm. Too many potential regular soldiers were lost to the Army in 1946–1947 in the fog of large holding companies and uncertain postings.

There can be no compromise in this problem. Either the combined existence of the Regimental spirit and traditions are accepted in the being of one Depot, one Battalion per Regiment, or else a Royal Corps of Infantry is created. There is little doubt that there is a widely held impression that the eventual creation of the latter has been the underlying purpose of all recent reorganization. The time is ripe for a firm declaration of policy on this point.

In discussing reorganization, with manpower as its basic purpose, there is an understandable tendency to confine consideration to Infantry only. If, however, the peace-time Army of to-day is examined as dispassionately as possible, it is soon apparent that there is an untidiness in the make-up of many of its ancillary Arms. The basic role of any Army in peace is to fit itself for war. It must therefore maintain components which are essential in war. The present positions of the Intelligence Corps, the Corps of Royal Military Police and the Royal Pioneer Corps serve to confound this theory.

The Intelligence Corps has no peace-time establishment, but continues to linger on with a complement of Short Service Commission Officers. The Royal Military Police, although with a more permanent future as a Corps, has no peace establishment of regular officers, and at the present time is officered, in the main, by Short Service Regular Commission officers. The Royal Pioneer Corps is apparently as indispensable

in peace as it was in war and continues to flourish with officers who are almost entirely serving on Short Service engagements. It would appear axiomatic that if these Arms are essential to the prosecution of war they should find a permanent place in the peace-time establishment.

For example, the duties of the Intelligence Corps and the Military Police are allied in so many ways that they would appear easily to lend themselves to amalgamation into one Corps, embodying within the Corps the Military Prisons Staff Corps and including in its mobilization commitments the manning of P.O.W. Camps. As it has a more permanent past and an established future it is perhaps forcing the issue to suggest that the Royal Army Educational Corps might well be included within the frameworks of a Royal Intelligence Corps, but the thought is there. After all, in total war the Education Officer at Divisional Headquarters very rapidly becomes an Intelligence officer!

The role of the Royal Pioneer Corps in peace is not so easily determined, but a start might well be made by delegating to them the task of providing permanent staffs for all Barracks and other fixed installations up to and including a Camp Commandant. Much manpower is diverted from its proper purpose when a battalion enters occupation of a barracks and has immediately to set about finding boilermen, sanitary men, cookhouse orderlies, gardeners and the like. A permanent caretaking staff would relieve the occupying unit of the many problems connected with interior economy and with the fabric of the barracks and would, at the same time, produce a greater degree of efficiency in running the establishment by very reason of its permanence.

This type of employment has of course close association with the Royal Army Service Corps and the alternative to the Royal Pioneer Corps becoming a permanent Arm of the Army which immediately suggests itself, is that it should be absorbed within the framework of the R.A.S.C. In the late war when the Pioneer Corps' main task was the provision of labour, large numbers of pioneers were employed directly under the R.A.S.C. in Base Supply Depots and in the actual handling of supplies in battle.

The Royal Army Service Corps is concerned with so many aspects of supplies and transport that it is tempting to suggest that it should absorb the Royal Army Veterinary Corps and the Army Catering Corps. The latter's policy and higher direction is already controlled through R.A.S.C. channels. The R.A.V.C. now forms such a minute section of the Army that although the manpower saved by amalgamation would probably be limited to an Assistant Director of Veterinary and Remount Services at a G.H.Q., its very strength should not permit it to remain as a separate service.

There are, no doubt, other forms of amalgamation—Royal Army Dental Corps with the Royal Army Medical Corps for example—by which easier control and a degree of manpower saving could be effected. All of them would undoubtedly offend tradition and susceptibilities but when the cloth is limited it is not only the sleeves that require to be taken in.

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# THE INFANTRY GROUP SYSTEM

By "SILVER BUGLE"

IRCUMSTANCES have forced upon the Infantry the Group System, and whether we infantrymen like it or not, it must be made to work if we are to avoid being turned into a soulless and impersonal Corps of Infantry. Surely every right-thinking infantryman wants to avoid this fate? Broad and progressive thinking, wise planning, and the co-operation of every infantryman will give the system a good chance of working.

It is the policy of the Army Council to maintain the Regiment, but to build up the Group System. To some this may sound inconsistent, but in reality it is not so if one looks back over the years. The Cardwell System was introduced because it became plain that the Regiment, as a single battalion, was not capable of functioning efficiently under the circumstances then in existence. What heart burnings and petty jealousies this produced at the time between some Regiments who were linked to form one Regiment of two battalions is too well-known to comment on, but what is worth remarking is that these soon died out and the two Regiments settled down to form one happy family.

Modern circumstances now decree that we must enlarge the family, hence we have the Group as the family and the Regiments as the individuals of that family. Surely that cannot be too hard for any modern infantryman to swallow? The regimental spirit is still kept fully alive by the link with the County through the Depot, the T.A. Battalions and, in these days, the Cadets who are the young blood who must be encouraged to carry on the traditions of the County Regiment.

Now how is the Group spirit faring? It is beginning to grow, and its strength varies for different reasons from Group to Group, but it has been given a firm bed because Groups are now called Brigades. This really is a rock on which to build, and I suggest that it should be more encouraged in the following ways.

First, there should be an active Color el of every Brigade Group whose function should be the same as that of a Lieut.-Colonel Commanding a Regiment in the Brigade of Guards. This will be explained in more detail later.

Secondly, battalions in the Group should now be numbered with the regimental title added in brackets after the number. Thus for example, in The Light Infantry Brigade one would have 1st Battalion Light Infantry (Somersets), 2nd Battalion Light Infantry (Duke of Cornwalls), and so on.

Thirdly, Brigades should wear a flash and, subsequently, a brigade cap badge and button common to all Regiments in the Brigade should be introduced. This will cause much argument in Groups but it obviously should be done. The Light Infantry Brigade has already taken this step as regards buttons, which in their case is fairly easy, and all six Regiments have the Bugle Horn in some part of the cap badge.

Fourthly, each battalion should keep its own regimental property such as silver, pictures and trophies, but might possibly lend a certain proportion to regimental companies in the Training Battalion of the Brigade, and to Regimental Depots where necessary.

Fifthly, decisions should be reached as to what customs of each Regiment should be common to the Brigade, and what customs may well be allowed to lapse. This would include one procedure for all battalions as regards forming up and dismissing parades, guard mounting and ceremonial, and the observance by all battalions of each others' important regimental days, such as Minden and Waterloo.

Sixthly, a Brigade history should be quickly written incorporating the main exploits of each Regiment forming the Brigade and taught to all who are serving in it and, of course, to recruits on joining. Each Regiment would, as well, keep its own regimental history and teach it to all serving in that particular battalion of the Brigade.

Going back to the function of a Lieut.-Colonel Commanding a Regiment of Foot Guards, his duties are briefly as follows:—he commands all battalions of the Regiment whether it may consist of three as in the case of the Grenadiers and Coldstream, or one as in the case of the Irish and Welsh, and he lays down all procedure dealing with dress, customs and habits of the particular Regiment. He is responsible for selection of officers and for recruiting for the Regiment, and has his own Record Office for this purpose. Within the Regiment he posts his own officers and men where he thinks fit, keeping of course supplementary lists of those employed on the Staff and Extra-Regimentally Employed; he deals personally with the M.S. and A.G. branches at the War Office on matters affecting them. He is in fact the father confessor of all officers and men, who can turn to him for help whenever they are in need and wherever they may be serving in the World.

An officer returning home from abroad reports to his regimental orderly room, where he is interviewed by the Lieut.-Colonel Commanding who advises the officer on what he should do in the immediate future with regard to his career, and is fully prepared and in a position to see that the officer gets what he either wants or should have. In giving his advice, he knows personally the military history and background of all officers under his command, which makes that essential personal contact and interest so sadly lacking elsewhere at present.

The same sort of procedure is adopted with Warrant and Non-Commissioned Officers and, in addition, important welfare cases are dealt with immediately, and settled quickly, to the obvious benefit of the good spirit within the Regiment. This is further supplemented by the care taken to try and find deserving men good jobs on leaving the Colours.

This brings us to the present extremely unsatisfactory posting of officers and other ranks which has grown up during and since the War.

There is no doubt that a Commanding Officer to-day has very little say about the movements of those under his command. His officers are posted to and from his unit by A.G. Branch at the War Office via Commands, while his men are similarly moved and removed by Records via the same channel. This causes uncertainty and discontent, and obviously does not make for a good spirit or efficiency. If a Colonel of a Brigade had his own Record Office he could at least make a 95 per cent. good shot at posting the right person to the right job within the Brigade, with obvious beneficial results all round. Under the present system, where an officer is merely a name and another rank a number, it is impossible to achieve the same result, as there is no personal knowledge of the individual. I do not blame those whose misfortune it is to carry out the tasks of postings in these days, they are merely victims of an impersonal bureaucratic system. Too often the employment and posting of a senior major is left in the hands of a junior staff captain. This is obviously wrong.

Next, the Training Battalion should become the Brigade Depot, where all Regiments meet on an equal footing. Each Regiment of the Brigade should have its

own County Depot for its county link and recruiting centre, for the T.A. Battalion, the affiliated Cadet Battalions and Old Comrades to come to for training and other regimental purposes. On mobilization the County Depots would take in and equip the reservists, and act as Holding Battalions or Companies for the Brigade as a whole.

The main reason for the Brigade Group System, the supply of reinforcements to battalions, is outside the scope of this article, but careful planning and thought on the highest level should make this nearly always possible. If a situation should arise where reinforcements have to be sent temporarily from one Group to another, then it should be accepted for the time being as needs must when the devil drives, but such procedure should only be a temporary measure and not for the duration of hostilities.

In conclusion, let all of us infantrymen by act and word, plan wisely for the advancement of the Brigade Group System, and bring to the notice of all those who are concerned with it our views and wishes.

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# HERALDRY AND THE ARMY

By LIEUT.-COLONEL H. C. B. ROGERS, O.B.E., Royal Signals

S in its first beginnings heraldry served the requirements of war, so to-day it is in the Services where its most widespread active, as opposed to its ornamental, use is to be found.¹ That heraldry still serves a very necessary military purpose was strikingly emphasized in the two last wars by the adoption of "signs" to distinguish the various formations. Badges, the distinctions of uniform and other insignia of Regiments and Corps have always been jealously guarded, and there is, in fact, probably no other military matter of such general interest to all ranks. In spite of this interest, however, there is a most astonishing lack of knowledge of the history, nature and employment of heraldic insignia. This is borne out by some of the very bad formation "signs" which have been designed and given official approval.

## THE COAT OF ARMS

As has been stated in the quotation at the head of this article the term "coat of arms" was originally applied to the garments which men wore over their armour on which their personal arms were embroidered. In modern usage it is generally applied to the complete achievement, that is the shield of arms, helm, mantling, wreath (or other base to the crest), crest, supporters, compartment and motto.

# The Shield of Arms

It was on the shield that a man's personal arms were originally displayed. They served to distinguish him in battle and tournament, and were the sole means of recognition when his features were covered by his helm. The first arms appear to have been very simple ones—a simple partitioning of the shield in different metals or colours, or a single coloured field with some plain device such as a bar, bend, chevron or cross. As these simple combinations became exhausted so the more complicated charges began to make their appearance.

The tinctures used for the arms consist of metals, colours and furs. The metals are gold (or) and silver (argent) which may be depicted as yellow and white respectively. The colours in common use are red (gules), blue (azure), green (vert), purple (purpure) and black (sable). The principal furs are ermine and vair. In addition a charge may be blazoned "proper" which means that it is depicted in its natural colours. It is an inflexible rule of heraldry, with the notable exception of the arms of Jerusalem (gold upon silver), that a metal may not be borne upon a metal nor a colour upon a colour. This rule only applies to heraldic colours and metals and not to fur or "proper." In the case of a shield which is partly a colour and partly a metal a charge which rests upon both parts may be either a colour or a metal.

<sup>1 &</sup>quot;From the circumstance that it first found its special use in direct connection with military equipments, knightly exercises, and the actual mêlée of battle, mediæval heraldry has also been entitled 'Armory.' Men wore the ensigns of heraldry about their persons, embroidered upon the garments that partially covered their armour, and so they called them coats of arms; and on their armorial banners and pennons they again displayed the very same insignia floating in the wind high above their heads from the shafts of their lances."—Bouttell's Manual of Heraldry.

### The Helm

In modern heraldry the helm surmounts the shield. The type of helm and whether it is shown facing the observer or in profile depends on the degree of the bearer of the arms.

# The Crest

The crest was originally an honour granted to the bearer of arms and worn on the top of the helm, modelled, frequently, out of boiled leather. It was probably only worn at tournaments, as it would have been an uncomfortable addition for battle to an already heavy helm. It was only very much later that the crest ceased to be an honour and accompanied the grant of arms. Within the last two hundred years all grants of arms have been accompanied by crests, but there are, of course, many possessors of ancient arms who have not got a crest. Possession of a crest without arms is, naturally, not possible.

### The Wreath

Except when it has a crown, coronet or cap as its base a crest is always shown on a wreath. The wreath originated in a twisted scarf which was worn round the helm to hide the join of crest and helm. It is usually shown as six sections of alternate metal and colour. These are normally the first-mentioned metal and first-mentioned colour in the blazon.

# The Mantling

The mantling was a piece of cloth which hung down the back of the helm to give protection to its wearer from the heat of the sun. It is represented as if slashed in battle and the ragged ends blown into a formal pattern. The colour in modern heraldry is generally that first mentioned in the blazon, and it is shown as lined with the first-mentioned metal. In the Royal Arms the mantling is gold lined with ermine.

## The Supporters, Compartment and Motto

Supporters may be human beings, beasts or heraldic monsters. Their use is restricted to the Sovereign, Peers of the Realm, Knights of the Garter, Thistle and St. Patrick, Knights Grand Cross of various orders, Dominions and Colonies, Corporations and certain others from ancient usage. Supporters stand on a Compartment which may be a grassy mound, a motto scroll or other form of support. In English heraldry the Motto is not hereditary and it may be changed at will without reference to the Officer of Arms. In Scotland it is hereditary and is included in the Letters Patent.<sup>2</sup>

A shield of arms is frequently shown surmounted by crest and wreath, but without helm, mantling or other accessories.

### THE BADGE

Badges are of very ancient origin. In pre-heraldic days various types of symbols were in common use for military purposes. The best known are probably the eagle of the Roman Legion and the Dragon of the Cohort. In heraldic times they were

<sup>&</sup>lt;sup>2</sup> It is perhaps appropriate to mention here that in England arms are hereditary to all the legitimate male descendants of an armigerous individual. In Scotland only the eldest son inherits and the second and younger sons must matriculate their arms in every generation. They may be given the paternal coat unchanged or with a difference, as adjudicated by the Lyon King of Arms.

originally introduced as devices to distinguish the followers of the great lords. As a natural development it became customary for an army or part of an army to bear the badge of its commander, and this badge would appear on his standard—the rallying mark of the force. The connection between this early use and the regimental badges and formation signs of the present day is clear.

The badge is frequently confused with the crest. The latter, however, is a personal possession and is only borne by the male members of a family.

The badge, however, has always been primarily the distinctive mark of men-atarms and servants. It is unfortunate, therefore, that the term "crest" is so frequently misused to-day. Even in the Army, the Badge of a Regiment is all too often called the "Regimental Crest," particularly in reference to its employment on notepaper and cards. There is, of course, no such thing.

Most modern Corps and Regimental badges of the British Army are beautiful examples of heraldic art. Very many Regiments possess more than one. The badges which are borne on the Regimental Colours of Infantry of the Line, for instance, can be found under the title of each Regiment in the Monthly Army List. These badges may differ from both cap and collar badges (which are not given in the Army List). Many of the blazons are an inspiration in themselves. That of the King's Own Royal Regiment, for instance, reads:

"The Royal Cypher within the Garter and the Crown over it. In each of the four corners the Lion of England."

Some of these badges are of very ancient origin. The Gold Dragon of the Welsh Guards was the centre of that last desperate stand at Hastings, and it seems likely that the West Saxons took it from the Britons who adopted it from the insignia of the Roman Cohorts. The White Horse-a badge of one Regiment of Cavalry and seven of foot, is as old as England. The Red and White Rose badges of the contending Royal Houses of Lancaster and York survive on the colours of Lancashire and Yorkshire regiments. We have the evidence of Samuel Pepys that the Royal Norfolk Regiment's figure of Britannia was originally modelled on King Charles II's favourite -the Duchess of Richmond. The original Britannia, however, is of still earlier origin since she appears with helm, spear and shield on a coin of the Emperor Hadrian's commemorating the construction of the Wall. The Lion passant guardant of the King's Own is taken from the Royal Arms of England which were first adopted by King Richard I. The ostrich feather badge of the Heir Apparent (erroneously assigned even in the Army List to the Prince of Wales) is borne by many regiments. The feathers were grouped in their present form in the time of the Stuarts and were shown as three separate plumes by Edward the Black Prince on his shield "for peace." They seem to have originated in the Arms of his mother Philippa of Hainault.

### UNIFORM

The origin of a distinctive national uniform was heraldic. In the Crusades the cross was worn as an emblem, different colours being used to distinguish the armies of the nations taking part. In the Third Crusade the English troops wore a white cross (the red one having been adopted by the French). In the XIVth and XVth Centuries, however, all English soldiers wore the red cross of St. George over their armour. C. Wilfred Scott-Giles in his *The Romance of Heraldry* quotes Speed's statement that King Edward III, when he founded the Order of the Garter under the patronage of St. George "Appoynted his Souldiers to wear white Coats or Jackets with a red Crosse before and behind over their Armour . . ." and " . . . it

was not only a comely but a stately sight to behold the English Battles like the rising Sunne, to glitter farre off in that pure hew; when the Souldiers of other Nations in their baser weedes could not be discerned." The same author reminds us that the wearing of the red cross was originally decreed by Pope Urban II at the Council of Clermont in 1095, in these words, "The Cross of Christ is the symbol of salvation. Wear it a red, a bloody cross, on your breast and shoulders, as a token that His help will never fail you; as the pledge of a vow which can never be recalled." The form of the cross left the uniform of the British Army, but the red was destined to become its distinctive colour until the exigencies of modern warfare forced it to don "baser weedes" for battle.

#### FLAGS

The flags in use by the British Army to-day comprise the Standards of the Household Cavalry and the Dragoon Guards, the Guidons of the Dragoons, the Colours of the Foot Guards and the Infantry of the Line, the pennons of formation commanders and the corps and regimental flags flown at barracks and camps which generally incorporate the regimental livery colours and badge. The Standards, Guidons and Colours represent some of the most perfect examples of heraldic art. The corps and regimental flags are frequently hideous.

In mediæval days there were three principal types of military flag. The pennon was small and either pointed or swallow tailed. It was borne below the lance head and charged with the badge of the bearer. It has its exact equivalent in the Commander's pennons of to-day which bear the badge of the formation which they command.

The Banner was square or rectangular and bore its owners' coat of arms. It has no modern military equivalent, since the Arms of the Sovereign are the only ones used by the Army.

The Standard was a large flag. It was long, tapered and slit at the fly, and generally divided per fesse (laterally) into two tinctures. The Standard bore the badge or badges of its owner and sometimes the motto. The national flag of the bearer was frequently shown in a compartment next to the lance or pike, e.g., The St. George's Cross of England. The Company Colours of the Welsh Guards are of this pattern, and a similar design has recently been produced for Regiments of the Royal Artillery, to replace the afore mentioned camp and barracks flags.

The essentially heraldic character of the Colours of the British Army is illustrated, for example, in the following blazon of the King's Colour of the 2nd Battalion Scots Guards:

"Gules (crimson): In the centre the Thistle and the Red and White Roses conjoined, issuant from the same stalk all proper ensigned with the Imperial Crown. Motto "Unita Fortior." In base the Sphinx superscribed "Egypt": In the dexter canton the Union."

# FORMATION "SIGNS"

Formation "Signs" were first introduced in the 1914-18 War as a distinguishing mark for formations. They formed an interesting revival of the original idea of the badge and emphasized the practical need which heraldry serves in modern war. Between the two Wars formation signs were retained in divisions of the Territorial Army but not in the Regular Army. In the late war formation signs were again revived and they seem to have become a permanent feature of the Army in peace.

Many of these signs were and are heraldic in character. Others suffered, however, by being designed by amateurs with no knowledge of heraldry or its rules. Designs were sometimes insipid and often lacked clarity through breaches of the colour rules. For example, several signs displayed a red charge on a blue field. Examples of good signs are the heraldic brook of 2nd Corps with its charge of a red salmon; 1st Corps' silver spear on a black field; and 2nd Division's crossed silver keys on a black field.

It is unfortunate that the advice of the Officers of Arms has not been sought with regard to those signs which are to remain in the Army. A sign which just misses being a good one is that of Anti-Aircraft Command. The device adopted is a crest which belonged, it is believed, to the original owners of the property which now houses the headquarters of the Command. The bow with arrow fitted and pointing upwards is appropriate enough; but it is depicted as black on a red field. In addition the wreath has been left as part of the charge, but it is shown either as a piece of twisted black material with many more sections than the original six or else as a straight black bar. A much happier design is Northern Ireland District's green field charged with the gold Harp and Crown within a gold bordure. It is fitting that a well-known badge of Ireland, and one that has been borne by so many past and present Irish Regiments, should have been adopted. In reproduction the bordure is frequently reduced to a thin gold line which is a minor blemish.

#### SUMMARY

Pictures and symbols are retained in the memory where the written word is forgotten. In the magnificent pageantry of heraldry is enshrined the fighting history of our race and our regiments, with all its incalculable value to esprit de corps. But the pictorial language of heraldry must be learned in order that both the traditions of the past should be presented vividly to the young soldier and that a high standard of design and presentation should be preserved.

Heraldry is a Christian thing and as such has an invaluable part to play in the struggle against the beastliness of atheistic materialism. The pride in his badges, colours and traditions which we require of the British soldier is exemplified in the words of an earlier warrior—

"Fluellen: Your Majesty says very true: if your Majesties is remembered of it, the Welshmen did good service in a garden where leeks did grow, wearing leeks in their Monmouth caps, which your Majesty know to this hour is an honourable badge of the service; and I do believe, your Majesty takes no scorn to wear the leek upon Saint Tavy's day."—King Henry V by William Shakespeare.

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# THE INTERNATIONAL SITUATION

## AUSTRIA

# RUSSIAN OBSTRUCTION TO THE PEACE TREATY

N an effort to get Russia to cease her obstruction to the conclusion of the proposed Austrian Treaty of Independence, the Ambassadors in Moscow of Britain, the United States and France went to the Kremlin on 18th January, and interviewed M. Gromyko—Soviet Deputy Foreign Minister. M. Gromyko was reported to have been "completely uncompromising."

Russia is ostensibly holding up negotiations on account of the delay in settling payments alleged to be due to her for services to Austria since the War. It is becoming increasingly obvious, however, that the Kremlin does not want to conclude this Treaty because, both from a strategic and economic point of view, Russia would be a loser thereby.

Until the Treaty is signed, Russian forces of occupation—with those of the other former Allies—remain in the Country; but, whereas this is of little or no military advantage to the Western Powers, it gives Russia the right to keep troops in Hungary and Rumania to "guard the lines of communication with Austria"—and, it might be added, to support the Communist governments in those Countries.

Economically, the strangle-hold by Russia on her Zone is being turned to good account for her. Over 1,200 factories are, at present, under the so-called U.S.I.A. organization and, as *The Times* correspondent in Vienna puts it, "nobody except the Russians knows what has happened to the plant . . . nor where the output goes. It is impossible to control what raw materials imported from the West find their way into them [the factories] and are there worked up into products that are exported eastwards . . . Marshall Aid goods can also escape eastwards in the same way." It seems probable, this report adds, that the Treaty will remain unsigned either till the Soviet Zone in Austria is no longer a profitable source of revenue to the Soviet Government or economic losses elsewhere more than counterbalance the attraction of staying in Austria.

An American statement, after the unsatisfactory interview with M. Gromyko, said, "consideration will be given to further appropriate action that may be taken to re-establish Austrian freedom and independence . . ." So far, there has been no British comment and it is difficult to see what action can be taken to eject Russia. To withdraw the Western Powers' forces would be to leave Austria a prey to Soviet domination and enforced Communism.

One thing has to be clearly recognized: the Kremlin can exercise oriental patience and pertinacity in obstructing the progress of any international agreements which are not likely to be of advantage to the Communist cause. It is interesting to compare this attitude with that of Hitler, who was continually announcing that his patience was "exhausted" when other nations seemed to be thwarting his ambitions.

# THE STRATEGIC IMPORTANCE OF SPAIN

Despite the assertion by a Government spokesman in a debate in the House on Spain, just a year ago, that it would be "fatal to regard the defence of Western democracy too much in military and strategic terms and too little in terms of moral principles," geography is a big factor in the Western Defence organization and cannot be ignored. It should help to bring this into clearer relief if we imagine, for a moment,

the danger which a communist Spain would be to that Defence. In the event of war with Russia, Spain would then be a springboard for attacking the under-belly of the Allies far more dangerous to them than their springboard—Britain, would be to Russia; Gibraltar could be made untenable; and one arm of the Red pincers would at once begin to close round the Mediterranean.

It may be countered that this is outside the realm of probability, for Franco has proclaimed that "a million Spaniards would fight if the Communist hordes should pass through Berlin." That, however, by no means implies that Spain can be enlisted in advance as an active partner in the Western Union. Politics which, if they have value, should unite peoples against a common danger before it materializes, have long divided Spain from "democratic" Countries and still do so to the detriment of their—and her—military security.

The United States—as is often their wont—have, however, taken the lead towards a more realistic attitude towards this situation. On 19th January, the Secretary of State—Mr. Acheson, made it known that his Country was ready to vote for a resolution in the United Nations leaving each Government a free choice in resuming full diplomatic relations with Spain. It was that body—getting more and more into disrepute on account of the crippling veto which Russia is able to apply under its existing organization—which, with Russian support, caused the major Powers to withdraw full diplomatic recognition, in the shape of Ministers and Ambassadors, from Madrid. "The United States had long questioned the wisdom and efficacy of the United Nations' resolution . . .," said Mr. Acheson in referring to the proposed change; ". . . public bewilderment has been increased over the inconsistency of accrediting Ambassadors to such Countries as those in Eastern Europe, whose régimes we do not condone, while at the same time refusing to appoint an Ambassador to Spain," he added.

This inconsistency is greatly accentuated in the case of Great Britain by the recent recognition of the Communist régime in China. It may well be asked why, if diplomacy is to be the handmaiden of expediency, it should not be consistent in being so.

## CHINA

#### RECOGNITION OF THE COMMUNIST GOVERNMENT

Formal recognition of the Communist Government of China was announced in Moscow on 2nd October, 1949. This was followed at once by Bulgaria, Rumania, Poland, Hungary, Czechoslovakia and Yugoslavia. On 16th December, Mao Tsetung—Chairman of the Central Committee of the Chinese Communist party and virtual Head of the State, arrived in the Soviet capital, where he was welcomed by M. Molotov and representatives of Russia's satellite Powers. Shortly afterwards he was received by Marshal Stalin. From Moscow, Mao Tse-tung made the somewhat incongruous statement that the primary objects of his visit were to "strengthen the world front for peace" and "intensification of the battle against warmongers."

The first non-Communist Country to recognize Communist China was Burma—on 9th December. She was followed, on 30th December by India; and, on 4th January, 1950, by Pakistan. Great Britain, Ceylon and Norway gave their official recognition on 6th January; Denmark and Israel on the 9th; Finland and Afghanistan on the 13th; and Sweden on the 14th.

<sup>&</sup>lt;sup>1</sup> In a speech at Seville on 11th October, 1948.

#### BRITISH RELATIONS

Britain's recognition was initiated by H.M. Consul in Peking who was authorized to inform the Chinese Premier and Foreign Minister—Chou En-lai, that *de jure* recognition had been accorded because the Communist Government was "in effective control of by far the greater part of the territory of China," and that Britain was ready to establish diplomatic relations "on a basis of equality, mutual benefit, and mutual respect for territory and sovereignty." The conditions were agreed. At the same time it was made known that H.M. Government had withdrawn recognition from the Nationalist Government.

# THE LAST NATIONALIST STRONGHOLD

This step marks the end of British support for Generalissimo Chiang Kai-shek—our somewhat difficult Ally in the late war.<sup>2</sup> Almost the last stronghold of the remnants of the Generalissimo's Nationalist party now is the island of Formosa, where he appears to have concentrated a small air force, which is mainly of nuisance value in trying to "blockade" ports on the mainland. This highly irregular warfare includes attacks on British and American shipping in Chinese waters—a policy which, whatever harm it may do to the economic interests of the new Government, is hardly likely to endear the fragments of the old one to their late Allies. It may be that Britain has been written off by the Nationalists as a false friend; but the United States have made it clear that they will not assist in the defence of Formosa or give any more military support to the old régime. The intentions of the Communist Government in regard to the Nationalists' retreat were announced in a New Year message, issued in Peking, which said that the tasks of the army in 1950 were the "liberation" of Formosa, Hainan and Tibet.

#### AMERICAN POLICY

The United States have not recognized the new Government. Indeed, the latter seem to have gone out of their way to alienate America by seizing U.S. consular property in Peking. As a result, all American officials have been withdrawn from China, and for the first time for more than a hundred years, the United States has no representative on the mainland. The American attitude towards the present situation in the Far East was dealt with by the Secretary of State—Mr. Acheson, in a speech made on 12th January.3 In this he contrasted the policy of his own Country with that of Russia. For fifty years, he said, it had been the profound belief of the American people that the control of China by a foreign Power was contrary to American interests and ". . . similarly in all the rest of Asia." Russian policy, he remarked, was the exact opposite. "The Soviet-Union is detaching the four northern areas-Outer Mongolia, Manchuria, Inner Mongolia, and Sinkiang-from China, and attaching them to the Soviet Union . . . I should like to suggest that this fact . . . is the single most significant fact in the relations of any foreign Power to Asia." He deprecated any "silly adventure" which would deflect Chinese attention from what the Russians were doing and bring on the United States the righteous anger and hatred of the Chinese—he was obviously scouting suggestions that the United States should counter the spread of communism in China and the Far East generally by giving military support to the Nationalists. There was, however, an implication in his speech

<sup>&</sup>lt;sup>2</sup> Admiral Sir Denis Boyd remarked in his lecture, "The Services in the Far East," on the failure of Chiang Kai-shek; see p. 46 of this JOURNAL.

<sup>3</sup> Reported in The Times of 16th January, 1950.

that the United States might be prepared to give help to countries bordering on China, if they wanted it, "after initial reliance on the people attacked." This seems to imply that a distinction is to be made between native Communism and Soviet expansion.

# THE UNITED NATIONS' PART

In view of the confused state of affairs in the Far East and their obvious threat to the peace of the World, it is only natural to ask what hand is the United Nations Organization taking in straightening them out. It is regrettable that, thanks mainly to the habitual Soviet refusal to co-operate, when not actively obstructing, international relations at Lake Success are only adding to the confusion and the acrimony.

The Kremlin's latest move to promote discord is to demand the dismissal of the Nationalist China representative from the U.N. Councils and his replacement by Peking's nominee. This, on the face of it, may seem logical enough and will doubtless come about in due course; but the other Powers are not prepared to be hurried or forced into making the change by any inconvenience caused by the Russian delegates walking out of meetings and thereby creating a temporary deadlock in dealing with such important subjects as atomic energy, Kashmir, the future of Jerusalem, and Spain.

In commenting on this state of affairs, Mr. Trygve Lie—the Secretary-General, referred to it marking "a new low" in the prestige and authority of the United Nations.

It is becoming increasingly clear that the Soviet policy of continued negation, obstruction and abuse is not only bringing the United Nations into disrepute but threatening the whole conception and organization with disillusion and disruption—but perhaps that is the Kremlin's long-term policy.

# GENERAL SERVICE NOTES GREAT BRITAIN

H.M. THE KING

The King, accompanied by the Queen, inspected the ship's company of H.M.S. "Amethyst" and representatives from H.M.S. "London," H.M.S. "Consort," H.M.S. "Black Swan" and the Royal Air Force in the Ball Room, Buckingham Palace, on 17th November, and invested officers and men with the decorations and medals which had been awarded.

The Princess Elizabeth, Duchess of Edinburgh, and The Princess Margaret were present.

#### NORTH ATLANTIC PACT

Paris Meetings of Defence and Military Committees.—The Defence and Military Committees of the North Atlantic Treaty Organization met in Paris on 29th November and 1st December, to consider questions relating to joint defence planning and coordination. The Military Committee, representing the Chiefs of Staff of the Atlantic Pact nations, and the Defence Committee, comprising the Defence Ministers of the twelve signatory countries, met jointly on 29th November, whilst the latter Committee under the chairmanship of Mr. Louis Johnson (United States Secretary of Defence) held another meeting on 1st December. After the second meeting a communiqué was issued announcing complete agreement between the Atlantic Pact nations on plans for the defence of the North Atlantic region, the production and supply of arms, and the co-ordination of planning between the various regional groups. The Committees and Regional Planning Groups concerned are as follows:—

NORTH ATLANTIC DEFENCE Council of Foreign Ministers (12 members)

Council of Defence Ministers
(12 members)

MILITARY COMMITTEE
(12 Chiefs of Staffs or Deputies)

STANDING GROUP (British, French, American Chiefs of Staff in Washington)

# REGIONAL PLANNING GROUPS

Canada	Western Europe Belgium	Northern Europe Denmark	Southern Europe W. Mediterranean		
U.S.A.	(Canada)	Norway	France		
	France	U.K.	Italy .		
	Holland	(U.S.A.)	U.K.		
	Luxembourg		(U.S.A.)		
	U.K.				
	U.S.A.				
	Canada	Canada U.S.A. Belgium (Canada) France Holland Luxembourg U.K.	U.S.A. (Canada) Norway France U.K. Holland (U.S.A.) Luxembourg U.K.		

Arrangements for collaboration and military standardization between the armed forces of Great Britain, the United States, and Canada were announced on 19th December in joint statements issued in London, Washington and Ottawa. Mr. Dean Acheson

stated on 30th November, that agreements concerning the shipment of American weapons and equipment were in the final stage of preparation with the Atlantic Pact nations.

ADDITIONS TO THE ORGANIZATION.—Approval has been given to a report of the Working Group on the establishment of two new bodies: a Defence, Financial and Economic Committee, and a Military Production and Supply Board.

Technical Discussions in Washington.—A party representing the three Services left for Washington on 11th January, to discuss a number of technical matters with the British Joint Services Mission and the American authorities. The members of the party were: General Sir William Morgan—chief of the British Services Mission in Washington, who had been in London on a routine visit; Lieut.-General Sir Gerald Templer—Vice-Chief of the Imperial General Staff; Lieut.-General Sir Kenneth Crawford—Controller of Supplies (Munitions), Ministry of Supply; Air Vice-Marshal E. G. Cuckney—Assistant Controller of Supplies (Air), Ministry of Supply; Rear-Admiral E. W. L. Longley-Cook—Director of Naval Intelligence. Mr. I. Montgomery, of the Ministry of Defence, was also with the party.

#### CIVIL DEFENCE

Recruiting for Civil Defence began on 15th November, 1949. The four organizations concerned with Civil Defence are :—

The Civil Defence Corps;

The Auxiliary Fire Service;

The National Hospital Service Reserve; and

The Special Constabulary.

The Civil Defence Corps is a Crown service for which the Home Secretary and the Secretary of State for Scotland are responsible. The local organization is the function of the local authorities. The main unit is the Division. In the London area the L.C.C., the Common Council of the City of London, and the Metropolitan Borough each organize a Division. In other parts of the Country, County Councils, County Borough Councils, and certain other Borough Councils are raising Divisions. Each Division outside the County of London is organized in six Sections—Headquarters, Warden, Rescue, Ambulance, Pioneer and Welfare. The L.C.C. Division has four Sections—Rescue, Ambulance, Pioneer and Welfare; the Metropolitan Borough Council Divisions and that of the City of London have four Sections—Headquarters, Warden, Pioneer and Welfare,

The organizations of the Auxiliary Fire Service and of the Special Constabulary are being fitted into that of the existing regular organizations.

The National Hospital Service Reserve will be recruited by the Minister of Health and the Secretary of State for Scotland. Its purpose is to concentrate the available medical and nursing manpower on the hospitals where static first-aid posts are being set up. Mobile first-aid units are being based on the hospitals.

A Civil Defence Staff College is located at Sunningdale Park, Sunninghill, Berkshire.

In general, eligibility for recruitment for all the services has been specified so as not to conflict with recruitment for the fighting forces. Anyone over 40 may join these Civil Defence services, and men and women between 30 and 40 are eligible for all the services unless they are in certain categories shown in the leaflets and enrolment forms for each service. Leaflets can be obtained at local Council offices. Training for these services will be in spare time.

By 3rd December, 15,039 people (11,081 men and 3,958 women) had enrolled in the Civil Defence Corps in England and Wales.

# EXERCISE "SOUTHERN SIREN"

Co-operation between the Army and the civil authorities in civil defence problems was studied in a three-day exercise, "Southern Siren," at Bulford which ended on 2nd

November. It was attended by senior officers of the Royal Navy, the Army, and the R.A.F., representatives of the Home Office, the Ministry of Health, regional officers, chief constables, and town clerks.

The exercise, which was directed by Lieut.-General O. L. Roberts (G.O.C.-in-C. Southern Command), is a sequel to "Britannia," the joint fighting Services-civil authority exercise held at Camberley in May this year.<sup>1</sup>

#### IMPERIAL DEFENCE COLLEGE

The following were selected to attend the 1950 course which started in January:—
ROYAL NAVY.—Captain J. R. B. Longden, O.B.E., Captain G. R. Waymouth,
C.B.E., R.N.; Captain F. B. Lloyd, O.B.E., R.N.; Captain B. Bryant, D.S.O., D.S.C.,
R.N.; Captain L. E. Porter, R.N.; Captain R. A. Currie, D.S.C., R.N.; Captain Sir
Charles E. Madden, Bt., R.N.; Lieutenant-Colonel A. J. Harvey, O.B.E., R.M.

Army.—Colonel R. W. Ewbank, D.S.O., B.A.; Brigadier J. R. C. Hamilton, D.S.O.; Colonel G. E. R. Bastin, O.B.E.; Colonel G. L. Pethick, D.S.O.; Brigadier P. St. Clair Ford, D.S.O.; Brigadier J. N. R. Moore, C.B.E., D.S.O.; Brigadier D. S. S. O'Connor, C.B.E.; Brigadier F. W. Sandars, D.S.O.; Brigadier N. P. H. Tapp, D.S.O.; Brigadier G. D. G. Heyman, C.B.E.

ROYAL AIR FORCE.—Air Commodore H. L. Patch, C.B.E.; Air Commodore J. R. Whitley, C.B., C.B.E., D.S.O., A.F.C.; Air Commodore G. L. Worthington, C.B.E.; Group Captain F. J. St. G. Braithwaite, C.B.E.; Group Captain J. H. Edwardes-Jones, C.B.E., D.F.C., A.F.C.; Group Captain J. M. Cohu, C.B.E.; Group Captain A. Earle, C.B.E.; Group Captain G. N. E. Tindal-Carill-Worsley, C.B.E.

CANADA.—Captain H. S. Rayner, D.S.C., R.C.N.; Brigadier H. A. Sparling, C.B.E., D.S.O.; Air Commodore W. E. Bennett; Mr. M. H. Wershof.

Australia.—Captain H. M. Burrell, R.A.N.; Colonel H. G. Edgar; Air Commodore V. E. Hancock, O.B.E., D.F.C., R.A.A.F.; Mr. F. O. Chilton, D.S.O.

NEW ZEALAND.—Brigadier C. E. Weir, C.B., C.B.E., D.S.O.

India.—A/Major-General S. D. Verma; Brigadier L. P. Sen, D.S.O.

PAKISTAN.—Commodore H. M. S. Choudri, M.B.E., Royal Pakistan Navy.

CIVIL SERVICE (FOREIGN SERVICE).—Mr. L. H. Lamb, C.M.G., O.B.E., Minister (A4); Mr. R. G. A. Meade, Consul-General.

CIVIL SERVICE (COLONIAL SERVICE).—Mr. C. A. L. Guise, M.B.E., Administrative Officer, Class III; Mr. H. G. Richards, O.B.E., Under-Secretary.

Home Civil Service (Administrators).—Mr. C. D. Campbell, Assistant-Secretary, Board of Trade; Mr. R. R. Goodison, Assistant-Secretary, Ministry of Transport; Mr. D. W. E. Haviland, Assistant-Secretary, Foreign Office (G.S.); Mr. S. C. Robbins, Assistant-Secretary, Ministry of Supply; Mr. T. Smith, Assistant-Secretary, Colonial Office; Mr. P. N. N. Synnott, Under-Secretary, Admiralty.

HOME CIVIL SERVICE (SCIENTISTS).—Mr. R. H. Franklin, Assistant Staff Engineer, Post Office; Mr. M. Hancock, Senior Principal Scientific Officer, Ministry of Supply.

#### STRENGTH OF THE ARMED FÖRCES

The quarterly return of defence manpower, issued on 21st November, 1949, showed that a total of 745,900 men and women were serving in the Forces on 1st October—a decrease of 23,000 as compared with the figure for 1st July, and 39,000 as compared with that for 1st April; and that, in addition, 236,000 civilians were engaged on work in the Forces. The total was made up as follows:—

			National			
			Regulars	Service	Total	
Royal Navy	 		130,000	11,700	141,700	
Army	 4 + 8 .	4 + +	195,000	197,200	392,200	
Royal Air Force	 		127,600	84,400	212,000	

<sup>1</sup> See Journal for August, 1949, p. 463.

The strength of the Auxiliary and Territorial forces on 1st October was 97,400 (93,000 on 1st July), made up as follows:—

R.N.V.R	0		1					4,800
R.M.F.V.R.								500
Territorial Arm	y and '	W.R.A.	C: (T.A	A.)		11.2.	11.00	79,400
R.A.F.V.R.								7,300
R.Aux.A.F.		***			***			5,400

# NEW AGREEMENT ON NORTH ATLANTIC OCEAN WEATHER STATIONS

The full text of the new International Agreement on North Atlantic Ocean Weather Stations, which supersedes the Agreement of September, 1946, has been published as a White Paper. The Agreement was drawn up in London on 12th May, 1949, between the Governments of Belgium, Canada, Denmark, France, Ireland, the Netherlands, Norway, Portugal, Sweden, the United Kingdom and the United States of America, Member States of the International Civil Aviation Organization.

Under the new Agreement the United Kingdom is responsible for two stations; the United States is responsible for four and shares responsibility for two others—one with the Netherlands and one with Canada; and France and Norway are responsible for one each. The United Kingdom operates four ships, the United States 14, France and Norway two each, and Canada and the Netherlands one each. In addition, the Netherlands provides another vessel to act as relief to the ships at one of the stations for which the United Kingdom is responsible and at the one for which France is responsible.

No notable changes are made in the functions of the ocean weather ships, except that those of other Countries are to be encouraged to increase the frequency of radio sonde ascents from two to four a day. Four ascents a day has always been the programme of the British ships.

The joint operation of certain ocean weather stations by vessels of two separate countries provides a unique example of international co-operation. The partnership of this nature between two great seafaring nations such as the United Kingdom and the Netherlands should be a happy one, maritime relations between the two Countries having for many years been extremely cordial.

#### PRESIDENT OF THE ORDNANCE BOARD

The Air Ministry announced the appointment, at the end of February, 1950, of Air Vice-Marshal Gerard Combe, C.B., as President of the Ordnance Board, Ministry of Supply, in place of Vice-Admiral Sir Harold Kinahan, K.B.E., C.B.

# LECTURES ON THE COMMONWEALTH

A short instructional course on "The Commonwealth," arranged for the three Services by the Royal Institute of International Affairs, was held at Chatham House, 10, St. James's Square, London, S.W.1, between 1st and 3rd December. A team of eminent speakers dealt with various aspects of the subject in a series of seven lectures, each of which was followed by discussion.

# DOMINIONS AND COLONIES CANADA

ATLANTIC PACT REPRESENTATIVE.—Brigadier S. F. Clark has been appointed the Canadian military representative on the Atlantic Pact organization in Britain, with the acting rank of Major-General.

VISIT OF COMMANDANT, CANADIAN NATIONAL DEFENCE AND ARMY STAFF COLLEGES.—Lieut.-General G. G. Simmonds, with members of his Staff and 25 students from the Defence College landed at Northolt Airport on 3rd December. During their stay in England they visited military establishments and civil organizations.

EXERCISE "EAGLE."—One of the largest operational exercises ever held by Canada's defence forces in peace-time was carried out last August, along the North-West Highway System. This big exercise was designed to test Princess Patricia's Canadian Light Infantry in their new role as an airborne, air transported fighting battalion, and to exercise R.C.A.F. fighter, bomber and transport squadrons in supporting the high-speed attack.

LANDING EXERCISE.—An amphibious landing exercise was carried out successfully between 21st and 31st October on the coast of Labrador, by four major ships of the United States Navy in co-operation with the Canadian authorities. The Canadian destroyer "Haida" was among the support forces, and Canadian Army Officers were with the task forces as observers.

ARCTIC EXERCISES IN 1950.—Two Arctic exercises are taking place early in 1950. The first will be a joint Canadian-United States Winter training exercise in the Yukon and Alaska in January and February; the second, an all-Canadian Exercise, Sun Dog, in the Fort Churchill area in February and March.

NORTH-WEST HIGHWAY.—The 58-mile addition to the North-West Highway System, connecting the isolated settlement of Atlin in North British Columbia to the Alaska Highway at Mile 865.5 (Jake's Corner) in the Yukon, is now almost completed.

#### AUSTRALIA

Mr. Chambers, Minister for the Army, fired a battery of rockets on 4th November in the Saltbush wilderness at Woomera before newspaper correspondents. The rockets were standard types which are used for trying out instruments essential to experimental missile development. Bigger missiles are still on the secret list.

#### PAKISTAN

After the demonstrations on 18th October to students of Quetta Staff College of assault landing technique at Clifton Beach, near Karachi, by a Pakistan battalion group of all arms, supported by the Royal Pakistan Navy and the Royal Pakistan Air Force, the combined operations exercise entered its second phase on 19th October, when a demonstration of a naval bombardment, followed by an aerial bombing attack, was staged by H.M.S. "Mauritius" (Captain T. J. N. Hilken) and a flight of six Lincoln heavy bombers of No. 9 R.A.F. Bomber Squadron, supported by 12 Tempest fighter-bombers of the R.P.A.F. The objective was Churnah island, off Cape Monze. Visibility was poor because of dust haze, but subsequently improved.

The "Mauritius" opened fire with her 6 in. guns at 24,000 yards, and a direct hit was registered by the second salvo. After three further salvos it was considered that the "enemy battery" on the island was neutralized, and fire was reduced to two-gun broadsides. On the range closing to 15,000 yards the "Mauritius" opened up with her 4 in. guns as well as her 6 in., and all the combined broadsides fell well within the target area.

#### KASHMIR

The United Nations Control Headquarters in Srinagar and Rawalpindi announced on 3rd November, 1949, that the demarcation of the cease-fire line in Kashmir under the Karachi agreement reached between the Indian and Pakistani Commanders-in-Chief had been completed, and that the terms of the agreement, involving not only demarcation of the line but also extensive troop adjustments along a wide front, had been fulfilled.

At the same time U.N. Headquarters announced that, as a supplement to the Karachi agreement, the two High Commands had also agreed to the following definitions of breaches of the cease-fire:—

- (1) Crossing of the cease-fire line.
- (2) Firing and use of explosives within five miles of the cease-fire line, without warning to the military observers.

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(3) New wiring or mining of position.

- (4) Re-inforcement of existing defensive positions with men or war-like stores.
- (5) Movements from the outside into Kashmir of any personnel, war-like stores and equipment other than for reliefs and maintenance.
  - (6) Flying of aircraft over the other side's territory.

#### MALTA

Shrine of Remembrance.—Princess Elizabeth was present on 2nd December at the rehallowing of St. Paul's Anglican Cathedral by Dr. C. D. Horsley, Bishop of Gibraltar, and the dedication by the Archbishop of Canterbury, Dr. Fisher, of the Shrine in memory of those in the forces who died in the defence of Malta during the War.

Malta War Memorial.—Princess Elizabeth, who was accompanied by the Duke of Edinburgh, unveiled four Commemorative Tablets at the base of the Malta War Memorial at Floriana on 8th December. The Tablets consist of the armorial bearings of Malta, the message of King George V at the end of the 1914–18 War, the message of King George VI awarding the George Cross to Malta, and the citation of President Roosevelt of December 7, 1943. A guard of honour was provided by the Royal Malta Artillery.

#### INDIA

PREFIX "ROYAL" DROPPED.—The Defence Ministry in Delhi announced on 29th December that the prefix "Royal" would disappear from the designations of regiments, corps, and units of the Indian Armed Forces when the new Constitution was inaugurated on 26th January. The expression "His Majesty's Indian Ship" would be replaced by "Indian Navy Ship." King's Colours in the possession of various units would be deposited at the National Defence Academy at Dehra Dun.

# FOREIGN FRANCE

M. Pleven—the Minister for National Defence, on 16th December, gave some details of the defence budget for 1950 to the Parliamentary committee on national defence.

The total Budget amounts to 420,000 m. francs, of which 280,000 m. francs is for defence properly speaking, and the balance for the war in Indo-China and for oversea territories.

This figure, the Minister emphasized, represented 18 per cent. of the total national Budget, compared with 23 per cent. in Britain and 33 per cent. in the United States. The total credit made over to the arms programme is 69,000 m. francs, a little more than last year's. Of this, the largest part—48,000 m. francs, is to go to the air force. The credits for armament factories would permit those under public control to function at 60 per cent. of capacity for ground equipment and 75 per cent. for naval construction.

The naval construction programme for 1950 is of 10,500 tons, including three escort vessels, two submarines, and 3,000 tons of amphibious craft. The Navy is expecting an aircraft-carrier from the United States under the terms of the Atlantic Pact.

M. Pleven also announced a forthcoming five-year plan for aircraft construction. It will be based on concentration on a small number of types—a training aircraft, a jet fighter, a twin-engined liaison aircraft, and a medium-sized cargo aircraft.

# GERMANY

Mr. Mayhew—the Foreign Under-Secretary, stated in a written answer on 14th November, 1949, that the estimated total expenditure by Britain on the occupation of the British zone in Germany from the end of the War to 31st March, 1949, was £590,000,000, of which about £390,000,000 was on military and civil occupation costs and about £200,000,000 on supplies and services for the German economy.

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#### ISRAEL

The Israeli Parliament has passed a Military Service Bill providing for two years national service for men between 18 and 26 years of age, and one year service for women between the same ages.

#### ITALY

The Italian Defence Minister—Signor Pacciardi, has announced in the Chamber of Deputies that a naval construction programme would be carried out between 1950 and 1955, at an estimated cost of 50 milliard lire (about £20,000,000), involving the reconstruction of the 8,000 ton cruisers "Duca Degli Abruzzi" and "Luigi di Savoia" and the building of two light A.-A. vessels, six destroyers specially adapted for defence against aircraft and submarines, fast motor boats, and coastal craft.

He also announced that the Army would be raised to the strength of 250,000 (troops and Carabinieri) allowed by the Peace Treaty, and that the number of Infantry Divisions would be increased from eight to twelve, some of which would be armoured.

He stated further that Italy was negotiating the purchase of jet fighters, and would possess modern aircraft by the end of 1949.

### UNITED STATES

Deputy to General Bradley.—Lieut.-General Willis Crittenberger has been appointed deputy to General Bradley as United States representative on the North Atlantic military committee and standing group. General Crittenberger is also chairman of the United States delegation of the United Nations military committee and chairman of the United States Army delegation to the inter-American defence board.

• MILITARY AID MISSIONS.—It was reported from Washington on 26th December that the United States will send abroad about 200 experts to help to get the military aid programme under way.

The average size of the mission to individual countries will be about twenty. Missions will be sent to Britain, France, Belgium, the Netherlands, Luxembourg, Denmark, Norway, and Italy. In addition, about forty persons will be stationed in the military aid regional office in London. Most of these will be ordnance experts to go from Country to Country and perform specific tasks.

In addition to army, navy, and air force officers, the missions will include State Department and E.C.A. representatives. All will work under the American Embassy, where they will be stationed. The upkeep of a mission must be paid for by the Government of the Country where it is stationed under the terms of military agreements now being negotiated by the State Department, but State Department officials think that the expense will be modest.

Senator's Statement on "Super" Atomic Bomb.—Senator Edwin Johnson, a member of the Joint Congressional Atomic Energy Committee, stated in Washington on 18th November, 1949, that the new atomic bomb tested at Eniwetok in 1948 had been six times more potent than the bomb used on Nagasaki in 1945, and that he had based his estimate of the power of the bomb on an official new release of the Atomic Energy Commission. Mr. Johnson also said that progress had been made towards the development of a "super" bomb which would be one thousand times more powerful than any now in production.

New Atomic Weapon Tests.—The United States Atomic Energy Commission and Department of Defence announced in a joint statement on 29th November, that they had advised President Truman that a new series of tests of atomic weapons were planned at the proving grounds at Eniwetok (Marshall Islands), in the Pacific; that full security restrictions as required by the Atomic Energy Act would apply to all aspects of the test operations, including the time of the tests; and that the operations would be carried out by a joint task force composed of personnel of the Army, Navy and Air Force and of the Atomic Energy Commission, under the command of Lieut.-General Quesada of the United States Air Force.

# NAVY NOTES GREAT BRITAIN

H.M. THE KING

On 8th November, the King, accompanied by Lord Hall—First Lord, and Admiral of the Fleet Lord Fraser—First Sea Lord, visited the United States cruiser "Columbus" at Portsmouth. The "Columbus," Captain C. R. McLean, U.S.N., is the flagship of Admiral R. L. Conolly, Commanding the United States Naval Forces in the Eastern Atlantic and the Mediterranean.

As the King stepped on board, the Royal Standard was hoisted. After an inspection, His Majesty took luncheon with Admiral Conolly, and among the guests were the American Ambassador—Mr. Lewis Douglas, and Admiral of the Fleet Sir Algernon Willis—Commander-in-Chief at Portsmouth.

On 21st December, the King presided at a dinner of officers of the Royal Marine Corps, of which he is Colonel-in-Chief, at the Savoy Hotel. His Majesty was preceded into the hall by his two Royal Marine Aides-de-Camp, Colonel R. H. Quill and Colonel E. E. Johnson. Over 300 officers were present from the Royal Marine Office at the Admiralty; the three Royal Marine Groups at Chatham, Plymouth and Portsmouth; the Home Fleet; the 3rd Commando Brigade; and the Royal Naval School of Music.

Captain W. B. Tanner, R.D., R.N.R., has been appointed a Royal Naval Reserve Aide-de-Camp to the King from 9th December, 1949, in place of Captain R. G. Thelwell, O.B.E., R.D., A.D.C., R.N.R.

The Rev. C. H. R. Cocup, O.B.E., R.N., has been appointed Honorary Chaplain to the King, in succession to the Rev. R. T. Venn, M.A., K.H.Ch., R.N., placed on the Retired List, to date 12th November, 1949.

#### PRINCESS ELIZABETH

Princess Elizabeth arrived in Malta on the second anniversary of her marriage, 20th November, to join her husband, the Duke of Edinburgh, who is serving as First Lieutenant of H.M.S. "Chequers," and remained over Christmas.

On 11th December, the Princess attended Divine Service in H.M.S. "Liverpool." The date was the thirteenth anniversary of the King's Accession, and ships of the Mediterranean Fleet and the American Sixth Task Force were dressed overall.

On 14th December—the King's Birthday, the Princess paid a formal visit to the Mediterranean Fleet. She reviewed ships' companies of warships in harbour from the barge of the Commander-in-Chief, and then went on board the aircraft-carrier "Glory," where more than 1,000 representatives from ships and shore establishments were assembled.

The Princess also fulfilled several other engagements during her stay, including a visit to Malta Dockyard on 16th December, when she was shown round by Commodore A. G. V. Hubback, the Commodore-Superintendent.

#### BOARD OF ADMIRALTY

The King has been pleased, by Letters Patent under the Great Seal, bearing date the 30th day of November, 1949, to appoint the following to be Commissioners for Executing the Office of Lord High Admiral of the United Kingdom:—

Right Hon. George Henry, Viscount Hall.

Admiral of the Fleet Bruce Austin, Baron Fraser of North Cape, G.C.B., K.B.E.

Admiral Sir Cecil H. J. Harcourt, K.C.B., C.B.E.

Vice-Admiral Michael M. Denny, C.B., C.B.E., D.S.O.

Vice-Admiral Herbert A: Packer, C.B., C.B.E.

Vice-Admiral Maurice J. Mansergh, C.B., C.B.E.

Vice-Admiral Sir George E. Creasy, K.C.B., C.B.E., D.S.O., M.V.O. Rear-Admiral Ralph A. B. Edwards, C.B.E. Right Hon. John Dugdale. Walter James Edwards, Esq.

Sir John Gerald Lang, K.C.B.

Bermuda Visit.—Mr. Dugdale, Parliamentary Secretary, and Vice-Admiral Packer, Fourth Sea Lord, left London airport on 4th January for an investigation of the naval bases in Bermuda.

It is understood that the object in view is to make considerable economies in connection with the dockyard, the working expenses of which—particularly the high wages paid to local labour, have grown out of proportion to its utility.

# FLAG APPOINTMENTS

It was announced on 10th November that the King had approved the following appointments:—

MEDITERRANEAN.—Admiral Sir John H. Edelsten, K.C.B., C.B.E., to be Commander-in-Chief, Mediterranean Station, in succession to Admiral Sir Arthur J. Power, G.B.E., K.C.B., C.V.O., to take effect in May, 1950.

East Indies.—Vice-Admiral G. N. Oliver, C.B., D.S.O., to be Commander-in-Chief, East Indies Station, in succession to Vice-Admiral C. H. L. Woodhouse, K.C.B., to take effect in April, 1950.

ROYAL NAVAL COLLEGE.—Vice-Admiral Sir Harold R. G. Kinahan, K.B.E., C.B., to be President of the Royal Naval College, Greenwich, in succession to Vice-Admiral G. N. Oliver, C.B., D.S.O. (March, 1950).

VICE-CONTROLLER (AIR).—Rear-Admiral E. M. C. Abel Smith, C.V.O., to be Vice-Controller (Air), Chief of Naval Air Equipment and Chief Naval Representative at the Ministry of Supply, in succession to Rear-Admiral The Mackintosh of Mackintosh, C.B., D.S.O., D.S.C. (February, 1950).

MEDITERRANEAN.—Rear-Admiral G. Grantham, C.B., C.B.E., D.S.O., to be Flag Officer (Air), Mediterranean, in succession to Vice-Admiral the Hon. C. E. Douglas-Pennant, C.B., C.B.E., D.S.O., D.S.C. (March, 1950).

FIRST CRUISER SQUADRON.—Rear-Admiral C. T. M. Pizey, C.B., D.S.O., to be Flag Officer Commanding, First Cruiser Squadron, in succession to Vice-Admiral the Earl Mountbatten of Burma, K.G., P.C., G.C.S.I., G.C.I.E., G.C.V.O., K.C.B., D.S.O. (April, 1950).

The following was announced in December:-

Rear-Admiral A. D. Nicholl, C.B.E., D.S.O., has become United Kingdom Principal Staff Officer, Southern European-Western Mediterranean Regional Planning Group, North Atlantic Treaty Organization, and he continues temporarily as British Naval Representative on the Brussels Treaty Military Committee.

The following were announced on 10th January:-

NAVAL SECRETARY.—The King has approved the appointment of Rear-Admiral W. W. Davis, D.S.O., to be Naval Secretary to the First Lord of the Admiralty, in succession to Rear-Admiral P. B. R. W. William-Powlett, C.B., C.B.E., D.S.O., to take effect on 3rd April, 1950.

MEDITERRANEAN DESTROYERS.—Rear-Admiral P. B. R. W. William-Powlett, C.B., C.B.E., D.S.O., to be Flag Officer (Destroyers), Mediterranean Fleet, in succession to Rear-Admiral H. W. U. McCall, C.B., D.S.O. (June, 1950).

The following were announced on 16th January:-

HYDROGRAPHER.—Rear-Admiral A. Day, C.B.E., to be Hydrographer of the Navy, in succession to Vice-Admiral Sir Arthur G. N. Wyatt, K.B.E., C.B. (Retired), to date May, 1950.

GERMANY.—Rear-Admiral The Mackintosh of Mackintosh, C.B., D.S.O., D.S.C., to be Flag Officer, Germany, and Chief British Naval Representative in Allied Control Commission, in succession to Rear-Admiral A. Day, C.B.E., to date March, 1950.

GIBRALTAR.—Rear-Admiral The Lord Ashbourne D.S.O., to be Flag Officer, Gibraltar, and Admiral-Superintendent, H.M. Dockyard, Gibraltar, in succession to Vice-Admiral P. W. B. Brooking, C.B., D.S.O. to date June, 1950.

MIDDLE EAST.—Rear-Admiral I. M. R. Campbell, D.S.O., to be Senior British Naval Officer and Flag Officer (Liaison), Middle East, in succession to Rear-Admiral A. L. Poland, C.B., D.S.O., D.S.C., to date March, 1950.

FIVE POWER COMMITTEE.—Rear-Admiral A. K. Scott-Moncrieff, D.S.O., to be British Naval Representative on the Five Power Military Committee, in succession to Rear-Admiral A. D. Nicholl, C.B., C.B.E., D.S.O., to date 10th January, 1950.

The following was announced on 21st November:-

Engineer-in-Chief.—Rear-Admiral (E) The Hon D. C. Maxwell, C.B., C.B.E., to be Engineer-in-Chief of the Fleet, in succession to Vice-Admiral (E) Sir Denys C. Ford, & K.C.B., C.B.E. (March, 1950).

# FLAG OFFICERS ON THE RETIRED LIST

Admiral Sir William Tennant has been appointed Chairman of King George's Fund for Sailors, in succession to the late Vice-Admiral Sir Thomas Troubridge.

Admiral Sir Denis Boyd has been appointed by the Governors of the Bonar Law Memorial Trust to be Principal of Ashridge College, in succession to General Sir Bernard Paget.

Vice-Admiral Sir Gilbert Stephenson has been appointed Honorary Commodore of the Sea Cadet Corps, in succession to the late Admiral Sir Lionel Halsey.

Rear-Admiral Sir William G. Agnew has been appointed Secretary of the National Playing Fields Association.

#### PROMOTIONS AND RETIREMENTS

The following promotions of Captain (E) to Rear-Admiral (E) were announced to take effect from 15th November, 1949:—

Captain (E) S. Brown.

Captain (E) G. C. Ross, C.B.E., A.D.C.

Captain (E) F. E. Clemitson.

#### HALF-YEARLY LISTS

The following promotions and retirements were approved, to date 7th January, 1050:-

To be promoted to Rear-Admiral in H.M. Fleet :-

Captain J. Hughes-Hallett, C.B., D.S.O., A.D.C.

Captain R. M. J. Hutton, C.B.E., D.S.O., A.D.C.

Captain I. M. R. Campbell, D.S.O., A.D.C.

Captain A. K. Scott-Moncrieff, D.S.O.

Captain (Commodore, First Class) W. W. Davis, D.S.O.

To be placed on the Retired List in the rank of Captain :-

Captain J. Terry, C.B.E., M.V.O., A.D.C.

Captain J. P. Wright, D.S.O., A.D.C.

Captain H. W. Williams, A.D.C.

Captain S. H. Paton, C.B.E., A.D.C.

Captain L. A. K. Boswell, D.S.O., A.D.C.

Captain H. St. L. Nicholson, C.B.E., D.S.O.

Captain A. T. G. C. Peachey, C.B.E., D.S.O.

Captain C. P. Frend.

Captain D. Orr-Ewing, D.S.O.

Captain H. L. St J. Fancourt, D.S.O.

Captain J. S. Crawford, D.S.O.

The following promotions were made to date 31st December, 1949:-

Commander to Captain.—H. Menzies, R. C. Lewis, A. G. Poe, A. E. T. Christie, C. H. Campbell, R. E. Portlock, R. R. S. Pennefather, R. Casement, C. C. Martell, R. H. Courage, H. J. F. Lane, E. A. Blundell, J. C. Stopford, T. D. Ross, A. F. P. Lewis, R. P. S. Grant.

Lieutenant-Commander to Commander.—R. M. W. MacFarlan, R. Gabbett-Mulhallen, M. J. A. O'Sullivan (Acting Commander), M. C. Morris, G. T. S. Gray, J. J. S. Yorke, I. M. Clegg, G. B. Barstow, E. M. Usherwood, C. B. Lamb, A. E. M. Raynsford, J. L. Buckeridge, R. Boyd, H. E. P. Wilkin, B. S. McEwen (Acting Commander) A. C. Tupper, C. D. Madden, T. E. Barlow, G. W. Vavasour, J. G. Wells, W. G. Meeke, J. Wood, J. H. Stenning, R. H. P. Carver, D. C. E. F. Gibson, W. W. Muir, P. N. Howes, J. S. Kerans, J. G. B. Morrow, G. H. C. Hunt, P. J. Morgan, P. G. Sharp, C. A. James, P. C. Whitfield.

Commander (E) to Captain (E).—H. F. Atkins, W. G. Pulvertaft, J. O. H. Gairdner, A. J. Tyndale-Biscoe (Acting Captain (E)), E. J. H. Kirby (Acting Captain (E)).

Lieutenant-Commander (E) to Commander (E).—J. F. Tucker, R. E. H. Blanchflower, H. A. Kidd, J. H. H. Perring, G. E. Baker, G. A. Partridge, R. C. Allen, D. N. Callaghan, N. A. Dolton, A. B. Dickie, F. C. W. Lawson, E. H. W. Platt, J. Sidgwick, J. Stedman, J. W. Mott.

Commander (L) to Captain (L).-K. R. Buckley.

Lieutenant-Commander (L) to Commander (L).—J. V. Kitchingman, G. Esson, T. J. R. Kirkby, C. F. Locke, H. R. Webber, G. J. B. Noel, A. A. Browne.

Instructor Commander to Instructor Captain .- H. S. Gracie, S. B. Taylor, T. E. Jackson.

Instructor Lieutenant-Commander to Instructor Commander.—A. E. C. Ellis, H. G. Tidy, J. R. Thorp, D. E. Mannering.

Surgeon Commander to Surgeon Captain.-W. P. E. McIntyre.

Acting Interim Surgeon Commander to Surgeon Commander.—D. W. Pratt, E. James, F. H. Lamb, B. R. Alderson, J. Carlton, J. Lees.

Surgeon Commander (D) to Surgeon Captain (D).—C. J. Finnegan (Acting Surgeon Captain (D)), D. L. Simpson.

Surgeon Lieutenant-Commander (D) to Surgeon Commander (D).—W. J. Wolton (Acting Surgeon Commander (D)), K. E. J. Fletcher, A. F. Ferguson (Acting Surgeon Commander (D)), S. J. Atkinson.

Commander (S) to Captain (S).—R. F. Pink.

Lieutenant-Commander (S) to Commander (S).—G. A. Henderson, P. G. Bowden, J. D. Trythall (Captain (S), Temporary Rank), H. E. B. Jenkinson, J. H. M. Cole, M. A. Tash.

#### PROMOTION TO REAR-ADMIRAL (RETIRED) FOR WAR SERVICE

On 17th November, it was announced that shortly after the termination of hostilities in the Second World War the Board of Admiralty decided to permit the promotion of a small number of re-employed Captains (Retired) to the rank or relative rank of Rear-Admiral on the Retired List to mark their distinguished service.

Names have been added to the list as these officers have been promoted on relinquishing their posts. The complete list is now as follows, with the dates on which they became effective:—

Captain C. M. Blackman, D.S.O., Captain G. H. Creswell, C.B., D.S.O., D.S.C., Captain J. Figgins, C.B.E., Captain L. E. H. Maund, C.B.E., Captain E. G. H. Bellars, C.B., and Captain (S) E. H. Drayson, C.B., C.B.E., all with effect from 1st March, 1946; Captain F. E. P. Hutton, C.B., 1st July, 1946; Captain H. E. Morse, D.S.O., 1st October, 1946; Captain H. B. Jacomb, C.B.E., 20th October, 1946; Captain (E) A. L. P. Mark-Wardlaw, 16th April, 1946; Captain (S) H. R. M. Woodhouse, C.B., O.B.E., 8th October,

1946; Captain (S) W. M. Hawkes, 3rd January, 1947; Captain A. J. L. Phillips, D.S.O., 22nd December, 1947; Engineer Captain C. J. Gray, D.S.O., 21st February, 1948; and Captain (E) O. W. Phillips, C.B.E., 4th December, 1949.

These promotions do not involve alterations in pay.

#### RETIREMENTS

Rear-Admiral B. C. B. Brooke, C.B., C.B.E., has been placed on the Retired List (11th October, 1949).

Rear-Admiral S. H. T. Arliss, C.B., D.S.O., has been placed on the Retired List (29th November, 1949).

Rear-Admiral Sir William G. Agnew, K.C.V.O., C.B., D.S.O., has been placed on the Retired List at his own request (11th January, 1950.)

Rear-Admiral (E) C. Ellis, C.B., has been placed on the Retired List (12th December, 1949).

Engineer Rear-Admiral Sir Sydney O. Frew, K.B.E., C.B., has been placed on the Retired List (4th January, 1950).

## HONOURS AND AWARDS

## NEW YEAR HONOURS

The following were among the New Year Honours conferred by the King :-

G.C.B .- Admiral Sir Arthur J. Power, G.B.E., K.C.B., C.V.O.

K.C.B.—Vice-Admiral the Hon. C. E. Douglas-Pennant, C.B., C.B.E., D.S.O., Vice-Admiral E. D. B. McCarthy, C.B., D.S.O.

C.B.—Rear-Admiral E. W. Anstice, Rear-Admiral (L) S. L. Bateson, C.B.E., Instructor Captain W. A. Bishop, O.B.E., R.N., Rear-Admiral C. P. Clarke, D.S.O., Rear-Admiral (E) W. G. Cowland, Rear-Admiral E. W. L. Longley-Cook, C.B.E., D.S.O., Rear-Admiral C. A. L. Mansergh, D.S.C., Surgeon Rear-Admiral J. A. Maxwell, C.V.O., C.B.E., K.H.S. (Retired), Rear-Admiral A. D. Nicholl, C.B.E., D.S.O.

G.B.E.—Admiral Sir Robert L. Burnett, K.C.B., K.B.E., D.S.O.

K.B.E.-Vice-Admiral R. S. G. Nicholson, C.B., D.S.O., D.S.C.

D.B.E.—Miss Jocelyn May Woollcombe, C.B.E., Hon, A.D.C., Director, Women's Royal Naval Service.

C.B.E.—Acting Rear-Admiral (S) H. P. Chapman, O.B.E., Surgeon Captain T. N. D'Arcy, R.N., Superintendent Anne McNeil, W.R.N.S., Captain T. D. Manning, V.R.D., R.N.V.R., Captain (E) J. H. P. Southby, R.N. (Retired), Major-General H. T. Tollemache, R.M.

#### YANGTZE AWARDS

In the London Gazette on 1st November, it was announced that the King had approved further awards to those engaged in the Yangtze incident, from April to July, 1949, in addition to the awards announced in May and August. Among them were the following:—

D.S.C.—Lieutenant P. E. C. Berger, R.N., for outstanding courage and devotion to duty in H.M.S. "Amethyst."

A posthumous Mention in Despatches was awarded to Surgeon Lieutenant J. M. Alderton, R.N., and a Mention in Despatches to Lieutenant K. S. Hett, R.N., for similar service.

D.S.C.—Flight Lieutenant M. E. Fearnley, R.A.F., for great courage when he was flown to the "Amethyst" and joined her under heavy fire.

The following awards were made for outstanding courage and devotion to duty:—

Bar to D.S.O.—Captain P. G. L. Cazalet, D.S.O., D.S.C., R.N., H.M.S. "London."

D.S.O.—Commander I. G. Robertson, D.S.C., R.N., H.M.S. "Consort."

D.S.C.—Mr. Reginald Smith, Senior Commissioned Gunner, R.N., H.M.S. "London."

Mention in Despatches.—Lieutenant W. H. Bonner, R.N., H.M.S. "Consort"; Commander R. G. W. Hare, O.B.E., R.N., and Surgeon Lieutenant W. L. Owen, R.N., H.M.S. "Black Swan"; and Surgeon Commander W. B. Taylor, R.N., H.M.S. "London."

A White Paper issued on 1st November (Cmd. 7813) announced the award of the Naval General Service Medal, with an appropriate clasp, for service in the Yangtze River on dates which cover the original attacks on the "Amethyst" and "Consort" on 20th April, down to the withdrawal of the "Amethyst" on 31st July. All those who were on board those ships on 20th April, on board the "London" and "Black Swan" on 21st April, in the Sunderland flying boat which flew to the "Amethyst" on 21st and 22nd April—including officers and men of the Army and Royal Air Force, and in the "Amethyst" up to 31st July, will receive the award. The clasp will bear the legend "Yangtze, 1949."

# RETURN OF H.M.S. "AMETHYST"

H.M.S. "Amethyst," Lieutenant-Commander J. S. Kerans, which escaped from the Yangtze on 31st July, arrived at Plymouth on 1st November, where she was welcomed by members of the Board of Admiralty. A civic welcome and luncheon was also given by the City of Plymouth.

On 16th November, officers and men, including detachments from other ships concerned, having been recalled from foreign service leave, assembled on the Horse Guards Parade, and were inspected by the Prime Minister and members of the Board of Admiralty, afterwards marching to St. Martin-in-the-Fields to attend a Service of Thanksgiving.

On the conclusion of the service, officers and men resumed formation and marched to the Guildhall, where they were entertained to luncheon by the Lord Mayor of London.

Next day, 17th November, officers and men were paraded before the King in the great ballroom of Buckingham Palace, where His Majesty inspected and addressed them. The King afterwards decorated 14 officers and men of the "Amethyst," "Consort" and "London."

#### EXERCISES AND CRUISES

HOME FLEET.—Ships of the Home Fleet left Portland on 28th January for the Spring cruise—the first under the new Commander-in-Chief, Admiral Sir Philip Vian. The Fleet proceeded to Gibraltar, and later will take part in exercises with the Mediterranean Fleet. The Home Fleet will leave Gibraltar for home on 27th March.

Training Squadron.—On 3rd November, H.M.S. "Anson," wearing a paying-off pendant, left Weymouth Bay for Plymouth on her withdrawal from the Training Squadron. Rear-Admiral E. M. Evans-Lombe transferred his flag to the aircraft carrier "Victorious" until the arrival later in the month of H.M.S. "Vanguard," which replaced the "Anson" as flagship.

MEDITERRANEAN.—The cruiser "Newcastle" arrived at Devonport on 13th December, from service in the Mediterranean. H.M.S. "Gambia," at present being refitted at Devonport, is expected to sail for the Mediterranean in April to replace the "Newcastle" in the First Cruiser Squadron. The aircraft carrier "Glory" arrived at Malta on 11th November, to join the Mediterranean Fleet in succession to the "Triumph," now in the Far East.

East Indies.—The cruiser "Kenya," en route to the Far East to replace the "London," left Suez on 30th December. Taking passage in her to Colombo was Mr. Ernest Bevin, the Foreign Secretary, on his way to attend the Commonwealth Foreign Ministers' Conference. The cruiser "Birmingham" was to sail from Trincomalee in January for the United Kingdom. She will be relieved by H.M.S. "Ceylon," now under refit at Portsmouth.

FAR EAST.—H.M.S. "Belfast," wearing the flag of Vice-Admiral A. C. G. Madden, Second-in-Command, Far East Station, paid a short visit to Saigon in mid-December. Admiral Madden called on Admiral Ortoli, Commanding the French Far Eastern Naval Forces, M. Pignon, the French High Commissioner, and the Emperor Bao-Dai. In November the "Belfast" afforded assistance to a Chinese ship in distress on Pratas Island.

TROOPING VOYAGE.—The light fleet carrier "Ocean" left Devonport at the end of November for the Far East. She carried naval reliefs for duties in the Mediterranean, East Indies and Far East Stations, and will return with men from the Far East and East Indies who have completed their normal periods of overseas service. This was the "Ocean's" second departure for the Far East in 1949. In September she returned to Devonport after taking military supplies from the Clyde to Hong Kong.

AMERICA AND WEST INDIES.—The frigate "Sparrow" in December completed a tour of settlements on the more remote of the Bahamas Islands, with the Acting Governor and the Attorney General on board. The islands visited included Cockburn Town, Salvadore, where Columbus made his landfall in 1492.

Training Cruise.—H.M.S. "Devonshire," Captain G. H. Stokes, with 250 Naval Cadets, including some from Dominion Navies, left Plymouth on 14th January on her Spring cruise. She will spend nearly two months in the West Indies, returning home via Gibraltar on 3rd April.

#### PERSONNEL

Officer Increase.—In answer to a question in the House of Commons, the Parliamentary Secretary said that reasons why the number of officers in the Royal Navy in 1938 was 8,410 for 110,590 other ranks, whereas in 1948 the officers numbered 13,358 for 145,642 other ranks, were mainly (a) the growth of naval aviation since 1938: the majority of aircrew are officers, and a considerably higher proportion of officers is thus needed for aviation duties than for general service duties; and (b) the greater complexity of weapons and equipment: this has involved an increased number of officers in 1948 for maintenance, training and development duties.

LOTT EFFICIENCY AWARDS.—The Committee of the Lott Naval Trust Fund, established in 1928 by the generosity of the late Mr. Herbert Lott, of Wallingford, Berkshire, a former member of the London Stock Exchange, has approved a series of awards by the Admiralty for marked efficiency in fighting practices in the Second World War. The list includes £200 each to Commander R. E. Portlock, O.B.E., R.N., and Commander Q. P. Whitford, O.B.E., R.N., for devising a valuable anti-U-boat tactical manœuvre, and lesser awards to 18 other officers and men.

Survival in Cold.—The ability of men to survive in conditions of extreme cold at sea is to be the subject of experiments which it is hoped to carry out in the Spring of 1950. Considerations of humanity as well as Service requirements make the experiments necessary. They are being designed by Dr. E. M. Glaser and Professor R. A. McCance, of the Department of Experimental Medicine, Cambridge University, for the Survival at Sea Sub-Committee of the Royal Naval Personnel Research Committee.

CHAPLAINS' HOURS.—To promote an interest in religious matters among officers and men of the Royal Navy, it has been decided to introduce a Chaplain's Hour in all H.M. ships and establishments, other than training establishments. It will consist of a period of not more than one hour every fortnight, to be set apart in working hours as Service conditions permit, run on discussion group lines. No officer or man is compelled to attend, but those who wish to do so are to be given facilities.

H.M.S. "VANGUARD" AND THE ROYAL ARTILLERY.—The inauguration of a Fellowship between H.M.S. "Vanguard," which mounts the greatest guns in the Royal Navy, and the Royal Regiment of Artillery was announced in a statement issued by the War Office on 6th January. The first step towards implementing the Fellowship was taken

on 9th January when the Director of Artillery, Major-General S. B. Rawlins, paid a formal visit to the battleship at Portland and discussed the matter with Captain G. V. Gladstone, R.N.

Travers and Greenwich Hospital Pensions.—An Order in Council of 25th November, published in the London Gazette on the 29th, authorizes the Admiralty to increase the amount of Travers Pensions from £75 a year, fixed in 1894, to £100 a year, for officers of the rank of Lieutenant, R.N., or retired from the active list of Lieutenants with the rank of Commander, provided that no officer shall hold a Travers Pension and a Greenwich Hospital Pension at the same time. (Travers Pensions were instituted under the Naval Knights of Windsor (Dissolution) Act of 1892.)

A further Order in Council of 25th November, provides that the fixed establishments and rates of Greenwich Hospital Pensions shall be discontinued, and that the Admiralty shall be authorized at their discretion to award such number of these pensions as the available funds of Greenwich Hospital permit to officers of the Royal Navy and Royal Marines on the Retired List who are selected as most deserving of them at a rate not exceeding £100 a year to any one officer.

#### MATERIAL

H.M.S. "ARK ROYAL."—Her Majesty the Queen will launch the new aircraft carrier "Ark Royal" at Birkenhead on 3rd May, 1950.

New A/S Frigate.—The design of a new anti-submarine frigate has been completed, and it is hoped to lay down the first of this class during the present financial year.

H.M.S. "Albion."—The uncompleted aircraft carrier "Albion," 18,300 tons, while being towed by three tugs from the Tyne to Rosyth for dry-docking, came into collision during a south-easterly gale on 18th October near the Longstone Light, Farne Islands, with the collier "Maystone," which was sunk with loss of life. The "Albion" was holed on the port side aft, but was safely berthed at Rosyth on the 19th.

RESERVE FLEET REFITS.—The Admiralty have announced a programme for the refitting by contract at private shipyards of 22 ships of the Reserve Fleet. This is part of the normal refitting programme, and the ships will remain in reserve unless it happens that any of them is required for service. The list includes six corvettes, three destroyers, three frigates, three boom defence vessels, three minelayers two motor minesweepers, one minesweeper and one trawler.

Gas-Turbo-Generator.—The advent of the gas turbine as a practical prime mover, with the potential advantages of low maintenance, compactness, and light weight, in addition to those of self-contained operation and quick starting, already associated with Diesel-driven generators, has led the Admiralty to investigate the development of a gasturbo-generator suitable for warships. A contract has been placed with Messrs. W. H. Allen, Sons and Co., Limited, of Bedford, for a 1,000 kw. gas turbine and generator for base-load operation. It is expected that trial running of the prototype engine will begin early in 1951 on completion of preliminary tests during the Autumn of 1950.

New Aircraft.—A contract for an unspecified number of "Prince" aircraft has been awarded to Percival Aircraft, of Luton, by the Ministry of Supply on behalf of the Royal Navy. The machines will be used for training and communications purposes.

SINKING OF THE OLD "IMPLACABLE."—On 2nd December, the hull of the old "Implacable" formerly the French-built wooden ship of the line "Duguay-Trouin," which became an English prize to the squadron under Rear-Admiral Sir Richard Strachan in an action which took place ten days after the Battle of Trafalgar, was scuttled in the English Channel in a position about nine and a half miles South-East of the Owers Light.

The sinking was witnessed by Admiral of the Fleet Sir Algernon Willis, Commander-in-Chief at Portsmouth, who directed the scuttling operations, and a party of official guests in H.M.S. "Finisterre," including Rear-Admiral M. J. Adam, French Naval Attaché. All attendant ships had their colours at half-mast, and in the "Finisterre" a Naval Guard was paraded and Royal Marine buglers sounded the "Last Post."

Admiral of the Fleet Lord Beatty's appeal for funds to save the old ship, which helped to keep her going as a holiday ship for young people, together with a coloured picture of her, were published in the JOURNAL of November, 1925.

THE SINKING OF H.M. SUBMARINE "TRUCULENT"

H.M. Submarine "Truculent" was sunk with the loss of 48 of her crew and 16 civilian dockyard workers as the result of a collision with the Swedish merchant ship "Divina" in the Thames Estuary on 12th January.

First news that the submarine had been involved in a collision reached the naval authorities at 8.15 p.m.—one hour and twenty minutes after the accident occurred. This was reported by the Netherlands merchant ship "Almdyk." The "Almdyk" picked up five survivors, including the commanding officer—Lieutenant C. P. Bowers, R.N., and three other officers.

All shipping was immediately warned, two lifeboats put to sea, the frigates "Cowdray" "Cadmus" and "Bicester," the wreck dispersal ships "Damsay" and "Rippon" and H.M. tug "Adherent" sailed from The Nore, and the destroyer "Finisterre," carrying recompression gear, was ordered to the Thames Estuary from Portsmouth. Further craft joined in the search for survivors at daylight the following day.

The submarine was on the surface when the collision occurred and was returning to Chatham from trials following a refit. She sank in about eleven fathoms within a minute. A further nine survivors, including two dockyard workers, were picked up later.

It is believed that a considerable number of men left the submarine by the escape hatches in the engine room and after part of the boat soon after the collision, but these men were carried away by the ebb tide before they could be picked up. It was a particularly black night.

A Board of Enquiry was convened by the Commander-in-Chief, The Nore, and opened at the R.N. Barracks, Chatham on 14th January, with Rear-Admiral J. Hughes-Hallett, C.B., D.S.O., as President.

On 25th January, the Admiralty announced that it had been decided to convene a Court Martial at Chatham for the trial of the commanding officer of H.M.S. "Truculent" on a charge of negligently or by default losing his ship. It was pointed out that in naval practice the loss of one of H.M. Ships is frequently followed by a Court Martial, and that a decision to convene one in this instance should not be taken to convey any implication regarding responsibility for the disaster.

Salvage operations were started at once.

H.M. the King sent a message of condolence to the next of kin, and a Memorial Service was held in Rochester Cathedral at which the First Lord and First Sea Lord were present.

WOMEN'S ROYAL NAVAL SERVICE

TROPICAL DRESS.—The King has approved a new tropical dress for the W.R.N.S. In white bleached mercerised drill, with a belt of the same material, the new uniform has an open necked collar with turned back reveres and with four buttons, whereas the old tropical dress buttoned to the neck with five buttons. The skirt of the new dress is slightly flared and has a single pocket inset, whereas the old dress had no flare and a patch pocket.

The dress is for W.R.N.S. officers and ratings serving overseas on ceremonial occasions and at social functions when uniform has to be worn (tropical working dress is a shirt and skirt). Officers, chief petty officers and petty officers wear gilt buttons, other ratings white horn buttons. Officers wear shoulder straps to indicate rank. Medals and decorations will be worn on this dress on occasions when they would be worn by other naval personnel, badges of Companions or Commanders of Orders being worn round the neck.

#### ROYAL NAVAL RESERVE

HALF-YEARLY PROMOTIONS.—The following were made to date 31st December, 1949:—

Commander to Captain .- J. T. Jones, A. Redford.

Lieutenant-Commander to Commander.—H. V. Williamson, R. J. N. Nicholas, W. N. Eade.

Commander (S) to Captain (S).-W. E. Violet.

# ROYAL NAVAL VOLUNTEER RESERVE

HALF-YEARLY PROMOTIONS.—The following have been made to date 31st December, 1949:—

Commander to Captain .- A. N. Benson.

Lieutenant-Commander to Commander.—A. T. Wilson, J. McC. Findlay, A. M. Hodge, G.C.

Lieutenant-Commander (E) to Commander (E).-R. D. Kedzlie.

Surgeon Lieutenant-Commander to Surgeon Commander.—K. W. Martin, C. H. F. Wood.

Lieutenant-Commander (S) to Commander (S) .- A. Wood, W. T. Horsfall.

#### ROYAL MARINES

RETIREMENT.—Major-General C. R. W. Lamplough, C.B.E., D.S.C., to Retired List (24th November, 1949).

PROMOTION.—Colonel H. T. Tollemache to be Major-General (24th November, 1949).

HALF-YEARLY PROMOTIONS.—The following were made to date 31st December, 1949:—

Lieutenant-Colonel to Colonel .- J. M. Phillips.

Major to Lieutenant-Colonel.—E. C. E. Palmer, I. H. Riches, A. G. C. Langford.
Captain to Major.—S. Hamilton, F. N. Grant, A. E. Ebsworth, P. W. C. Hellings,
D. B. Drysdale.

School of Music.—The Royal Naval School of Music, established in 1903 to train and maintain the bands of H.M. ships and naval shore establishments, is to return to Deal, Kent, where it was located before the Second World War. The school has been in temporary accommodation at Burford, Oxfordshire. When the move is completed in February the Royal Marine Depot at Deal and the Royal Naval School of Music will be merged under one Commanding Officer, who will be known as the Commanding Officer, Royal Marines, Deal, and Commandant, Royal Naval School of Music.

CHATHAM FREEDOM.—The Honorary Freedom of Chatham, where Royal Marines have been quartered for over two hundred years, was presented to the Corps at a ceremony at the R.M. Barracks, Chatham, on 8th December.

#### CANADA

Labrador Landing Exercise.—An amphibious landing exercise on the coast of Labrador was carried out successfully during the last ten days of October by four major ships of the United States Navy, in co-operation with the Canadian authorities. This was the first exercise of its kind in high latitudes. The Canadian destroyer "Haida" was among the support forces. Rear-Admiral Thackery, U.S.N., led the Task Group, which consisted of over forty vessels and 11,000 seamen and marines. The landing force consisted of a reinforced battalion of American marines. An assault was made at Cape Porcupine, and within six days the objective—an "enemy-held" weather reporting station and airstrip, was captured.

# DOMINION AND COMMONWEALTH NAVIES AUSTRALIA

New Destroyer.—H.M.A.S. "Tobruk," the biggest warship yet built in Australia, has begun her sea trials. She is a "Battle" class destroyer similar to H.M.A.S. "Anzac," launched in August, 1948. The two ships will be valuable additions to the growing Royal Australian Navy.

Manus Base.—The advanced R.A.N. base at Manus, in the Admiralty Islands, was commissioned as H.M.A.S. "Seeadler" on 1st January, and takes the place of the base

at Dreger, New Guinea, H.M.A.S. "Tarangau." Manus was a major base for the United States and British Pacific Fleets during the late war.

SUBMARINE BASE AT SYDNEY.—The Minister of the Navy has announced that the Federal Government has accepted an offer by the Admiralty to base R.N. submarines in Australia to assist officers and ratings of the Royal Australian and the Royal New Zealand Navies to obtain adequate training in anti-submarine work. These submarines will be based on H.M.A.S. "Penguin"—the Naval establishment at Balmoral, Sydney.

# NEW ZEALAND

FRIGATE EXCHANGE.—To further the exchange of naval technique and information, arrangements have been made between the United Kingdom Government and the New Zealand Government for an exchange of naval units between the Royal Navy and Royal New Zealand Navy. The first exchange will be between two frigates from New Zealand—H.M.N.Z.S. "Taupo" and H.M.N.Z.S. "Howeo," and two from the Mediterranean Fleet—H.M.S. "Veryan Bay" and H.M.S. "St. Austell Bay." The former should leave New Zealand about the end of March, 1950, arriving in the Mediterranean in April and leaving early in November. All four ships will meet at Aden on both the outward and homeward passages.

## SOUTH AFRICA

REQUISITION OF TWO DESTROYERS.—Lieut.-General Len Beyers—Chief of the South African General Staff, has stated that it is the Union Government's intention to take over two of the four British destroyers of the "Wager" class, laid up at Simonstown. They would be manned by South African crews.

#### INDIA

New Year Honours.—The following were included in the India List in the New Year Honours conferred by the King:—

K.C.B.-Vice-Admiral William E. Parry, C.B.

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C.B.E.—Captain (Commodore, 2nd Class) H. N. S. Brown, O.B.E., R.N. (See also General Service Notes.)

#### PAKISTAN

Destroyer Transferred.—The destroyer "Offa" was transferred to the Royal Pakistan Navy at Plymouth on 7th November by Admiral Sir Robert Burnett, Commander-in-Chief, on behalf of the Government and Board of Admiralty. The High Commissioner for Pakistan—Habib Rahimtoola, accepted the ship on behalf of his Government, and she was renamed H.M.P.S. "Tariq," after the famous Moorish General, by the Begum Iskander Mirza—wife of Lieutenant-Colonel Iskander Mirza, the Pakistan Secretary for Defence.

STAFF EXERCISE.—H.M.S. "Mauritius" visited Pakistan to assist the Staff College, Quetta, in the first big combined operations exercise to be held there since the War and since partition. The exercise ended on 21st October, when the "Mauritius" and Pakistan units returned to Karachi.

The hospitality extended to officers and men by both British and Pakistan communities was remarkable. Captain T. J. N. Hilken, D.S.O., R.N., commanding the "Mauritius," visited the Pakistan ship "Bahadur"—boys' training establishment, and was impressed by the keenness and good physique of the boys and by the enthusiasm of the Commanding Officer.

# FOREIGN NAVIES

#### BELGIUM

British Minesweepers.—Six "Algerine" class fleet minesweepers are being acquired by the Belgian Navy. The first to be transferred—H.M.S. "Liberty," completed in 1944, was handed over at a ceremony at Portsmouth on 29th November by Admiral of the Fleet Sir Algernon Willis, Commander-in-Chief, and accepted by the Belgian Ambassador on behalf of his Government. The next to be transferred was the "Cadmus," which was handed over at Chatham Dockyard on 31st January.

#### HOLLAND

Showing the Flag.—Prince Bernhard of the Netherlands left Holland on 2nd January on board the aircraft carrier "Karel Doorman," accompanied by two other Dutch warships, on a three months goodwill tour during which he will visit the Netherlands West Indies (the Dutch Antilles and Dutch Guiana) and also Venezuela, Brazil, Mexico, the United States, and Canada. The Prince was to fly to Rio de Janeiro, Mexico, New York and Montreal in a Dakota aircraft piloted by himself.

#### **EGYPT**

FRIGATES.—In reply to a question in the House of Commons, the Civil Lord stated that six frigates had been transferred to Egypt during the previous few months and the transfer of a seventh was under negotiation. Payment had been made for three by sterling cheque.

#### UNITED STATES

Economy Measures.—On 30th October, the Navy Department announced that 77 ships, including five aircraft carriers, were being withdrawn from seagoing service as an economy measure because of decreased funds. It was also announced that the Navy and Marine Corps strength would be reduced by 54,891 men by 1st July, 1950, to correspond with the reduction in ships. In addition to the war vessels, 42 other craft, including tankers and seaplane tenders, are to be put into reserve, or used for reserve training. The reduction will be offset to some extent by the recommissioning of the light carrier "Bataan" and the submarine "Guavina," and the commissioning of two new submersibles, the "Grenadier" and "Grampus." The Navy will keep in commission three 45,000-ton carriers—the "Midway," the "Franklin D. Roosevelt" and the "Coral Sea," and one 45,000-ton battleship—the "Missouri."

CHIEF OF NAVAL OPERATIONS.—President Truman announced on 27th October that Admiral Louis E. Denfeld would be removed from the post of Chief of Naval Operations and assigned to other important duties. This decision followed certain criticisms by Admiral Denfeld before the House of Representatives Armed Services Committee of certain activities of the Joint Chiefs of Staff.

On 1st November, the President announced that Vice-Admiral Forrest Sherman, who had been in command of the United States Sixth Task Fleet in the Mediterranean, would succeed Admiral Denfeld as Chief of Naval Operations.

On 19th December, the Navy Department announced that Admiral Denfeld had refused the proffered post of Commander, United States Naval Forces in European Waters. Refusal was based on his belief that other nations might not have the necessary confidence in him which a Commander in Europe should have.

ATLANTIC FLEET COMMAND.—On 29th December, the Navy Department announced that Admiral William Blandy—Commander-in-Chief of the Atlantic Fleet since February, 1947, would retire on 1st February, 1950. His successor is Admiral William Fechteler, Chief of Naval Personnel and a former Commander of the Atlantic Fleet. Admiral Blandy, who is 59, served in the Pacific during the War and in 1946 commanded the force that conducted the atomic bomb tests at Bikini.

Western Pacific.—On 29th December the Navy Department announced that the aircraft carrier "Boxer" and two destroyers had been ordered to reinforce the Seventh Task Fleet in the Western Pacific. The announcement described this fleet as "a mobile force readily available to support United States national policy and to serve as a stabilising influence in the Western Pacific." The Seventh Task Fleet previously included one heavy cruiser and four destroyers. Another heavy cruiser and four destroyers are also maintained in Japanese waters. The "Boxer" is a fleet carrier of the "Essex" class of 27,100 tons, and carries an air group of about 100 fighter and air attack bomber aircraft.

# ARMY NOTES

#### GREAT BRITAIN

## H.M. THE KING

The King has been graciously pleased to approve the appointment of H.R.H. The Princess Margaret as Colonel-in-Chief of the Highland Light Infantry of Canada, with effect from 12th December, 1949.

The Queen visited the Headquarters of the Inns of Court Regiment, Lincoln's Inn, on 16th November.

On 19th December, the Queen visited the 1st Battalion, The London Scottish, of which Regiment Her Majesty is Honorary Colonel, at 59, Buckingham Gate.

The Princess Elizabeth, Duchess of Edinburgh, as Colonel of the Regiment, inspected the 3rd Battalion, Grenadier Guards, at Chelsea Barracks, on 18th November.

The Princess Royal, Colonel-in-Chief The West Yorkshire Regiment, presented prizes at the Annual prizegiving of the 584th (Mob.) H.A.A. Regiment (6th Battalion, West Yorkshire Regiment), R.A. (T.A.), at Bradford on 25th January.

On 27th January, The Princess Royal, Controller Commandant, attended a Conference of the Women's Royal Army Corps, at York.

The King has approved the following appointments:-

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To be Aides-de-Camp to the King.—Colonel (temporary Major-General) G. A. N. Swiney, C.B.E., M.C., R.A.O.C. (24th October, 1949) vice Colonel (honorary Brigadier) H. C. Whitaker, C.B.E., retired; Brigadier G. M. Gamble, O.B.E., late Infantry (29th October, 1949) vice Brigadier W. Carden-Roe, C.B.E., M.C., retired; Brigadier A. de L. Cazenove, C.B.E., D.S.O., M.V.O., late Foot Guards (29th October, 1949) vice Major-General B. Temple, C.B., O.B.E., M.C., promoted; Brigadier E. J. H. Douch, O.B.E., late R.A. (29th December, 1949) vice Brigadier G. G. Mears, C.B.E., D.S.O., M.C., retired; Brigadier C. Bullard, C.B.E., B.Eng., M.I.Mech.E., M.I.E.E., R.E.M.E. (3rd January, 1950) vice Brigadier C. Campbell, C.B.E., M.I.Mech.E., retired.

TO BE HONORARY SURGEON TO THE KING.—Colonel K. B. Fraser, E.D., M.B., Ch.M., M.S., F.R.A.C.S., Royal Australian Army Medical Corps (18th November, 1949) vice Brigadier (Hon. Major-General) R. W. W. Walsh, D.S.O., V.D., M.B., retired.

TO BE COLONEL COMMANDANT.—Of the Royal Electrical and Mechanical Engineers, Major-General W. S. Tope, C.B., C.B.E., M.I.Mech.E. (17th January, 1950) vice General Sir Walter K. Venning, G.C.B., C.M.G., C.B.E., M.C., tenure expired.

To be Colonel of a Regiment.—Of the Green Howards, Brigadier (Hon. Major-General) A. E. Robinson, C.B., D.S.O., late Infantry, retired pay (21st October, 1949) vice General Sir Harold E. Franklyn, K.C.B., D.S.O., M.C.

Representative Colonels Commandant, 1950.—The following have been appointed Representative Colonels Commandant of their respective Corps and Regiments for the period 1st January to 31st December, 1950:—

Royal Armoured Corps (R.T.R. Wing).—Field-Marshal The Viscount Montgomery of Alamein, K.G., G.C.B., D.S.O. (Cavalry Wing).—Lieut.-General Sir Charles F. Keightley, K.B.E., C.B., D.S.O.

Royal Tank Regiment.—Major-General Sir Percy C. S. Hobart, K.B.E., C.B., D.S.O., M.C.

Royal Artillery.—Colonel (Honorary Major-General) F. W. H. Pratt, C.B., C.B.E., D.S.O., M.C.

Royal Engineers.—General Sir Edwin L. Morris, K.C.B., O.B.E., M.C.

Royal Signals.-Major-General W. R. C. Penney, C.B., C.B.E., D.S.O., M.C.

Royal Army Service Corps.—Major-General Sir H. Reginald Kerr, K.B.E., C.B., M.C., M.Inst.T.

Royal Army Medical Corps.-Major-General R. E. Barnsley, C.B., M.C., M.B.

Royal Army Ordnance Corps. - Major-General K. M. Body, C.B., C.M.G., O.B.E.

Royal Electrical and Mechanical Engineers.—Major-General Sir E. Bertram Rowcroft, K.B.E., C.B., M.I.Mech.E., M.I.E.E.

Royal Army Dental Corps.—General Sir Ronald F. Adam, G.C.B., D.S.O., O.B.E., L.L.D.

# HONOURS AND AWARDS

MALAYA.—The following awards in recognition of gallant and distinguished services in Malaya during the period 1st January, 1949, to 30th June, 1949, were included in a list jublished in a Supplement to the London Gazette, dated 13th December, 1949:—

C.B.-Major-General D. Dunlop, C.B.E.

K.B.E.-Major-General C. H. Boucher, C.B., C.B.E., D.S.O.

New Year Honours,—The following were included in the New Year Honours List:—

G.C.B.-Field-Marshal Sir William J. Slim, G.B.E., K.C.B., D.S.O., M.C.

K.C.B.—General Sir Evelyn H. Barker, K.B.E., C.B., D.S.O., M.C., A.D.C.; Lieut.-General J. F. M. Whiteley, C.B., C.B.E., M.C.

C.B.—Brigadier E. G. Audland, C.B.E., M.C.; Major-General W. M. Broomhall, D.S.O., O.B.E.; Major-General R. L. Brown, C.B.E.; Major-General A. J. H. Cassels, C.B.E., D.S.O.; Major-General R. B. B. B. Cooke, C.B.E., D.S.O.; Major-General M. N. Dewing, C.B.E., D.S.O., M.C.; Major-General H. J. Higgins, O.B.E., F.D.S., K.H.D.S.; Brigadier C. E. R. Ince, C.B.E.; Major-General A. P. Lambooy, O.B.E.; Temporary Major-General F.R.H. Mollan, O.B.E., M.C.; Brigadier W. Carden-Roe, C.B.E., M.C.; Major-General W. A. Scott, C.B.E.; Brigadier C. R. A. Swynnerton, D.S.O., A.D.C.

K.B.E.—Lieut.-General G. W. E. J. Erskine, C.B., D.S.O.; Lieut.-General C. G. G. Nicholson, C.B., C.B.E., D.S.O., M.C.; Lieut.-General O. L. Roberts, C.B., C.B.E., D.S.O., B.A.; Temporary Lieut.-General D. Russell, C.B., C.B.E., D.S.O., M.C.

Royal Red Cross First Class.—Temporary Chief Commander Cecile M. Johnson, A.R.R.C.

# APPOINTMENTS

WAR OFFICE.—Colonel (temporary Brigadier) L. D. Grand, C.I.E., C.B.E., appointed Director of Fortifications and Works, with the temporary rank of Major-General (9th September, 1949).

Major-General C. M. Barber, C.B., D.S.O., appointed Director of Infantry and Military Training (November, 1949).

Colonel A. C. Shortt, O.B.E., appointed Director of Military Intelligence (December, 1949).

Major-General N. C. D. Brownjohn, C.B., C.M.G., O.B.E., M.C., appointed Vice-Chief of the Imperial General Staff (February, 1950).

Major-General M. S. Chilton, C.B., C.B.E., appointed Vice Quarter-Master-General (February, 1950.)

UNITED KINGDOM.—Brigadier J. M. MacFie, C.B.E., M.C., M.B., appointed Commandant and Director of Studies, Royal Army Medical College, with the temporary rank of Major-General (28th November, 1949).

Lieut.-General Sir Gerald W. R. Templer, K.B.E., C.B., C.M.G., D.S.O., appointed G.O.C.-in-C. Eastern Command (February, 1950).

GERMANY.—Lieut.-General Sir Charles F. Keightley, K.B.E., C.B., D.S.O., from G.O.C.-in-C., British Army of the Rhine, appointed C.-in-C. British Army of the Rhine (21st September, 1949).

Major-General V. J. E. Westropp, C.B., C.B.E., appointed Commissioner (Major-General), Military Security Board (16th October, 1949).

Major-General L. Wansborough-Jones, C.B., C.B.E., appointed Chief of Staff, Control Commission for Germany (14th November, 1949).

Australia.—Major-General A. J. H. Cassels, C.B., C.B.E., D.S.O., appointed Chief Liaison Officer, United Kingdom Service Liaison Staff, Melbourne (16th December, 1949, instead of January as previously reported).

NIGERIA.—Major-General C. B. Fairbanks, C.B.E., appointed Commander, Nigeria District (9th November, 1949).

Greece.—Major-General C. D. Packard, C.B., C.B.E., D.S.O., appointed Commander, British Military Mission (10th November, 1949).

### PROMOTIONS

The following promotions have been announced:-

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General.—Lieut.-General to be General:—Sir John Harding, K.C.B., C.B.E., D.S.O., M.C. (9th December, 1949).

Lieut.-General.—Major-General to be Lieut.-General:—K. G. McLean, C.B. (14th November, 1949).

Major-Generals.—Temporary Major-Generals or Brigadiers to be Major-Generals:—H. A. Hounsell, C.B.E. (8th October, 1949); K. F. Mack-Lewis, D.S.O., M.C. (12th October, 1949); B. Temple, C.B., O.B.E., M.C., A.D.C. (29th October, 1949); C. S. Sugden, C.B., C.B.E. (14th November, 1949); S. N. Shoosmith, D.S.O., O.B.E. (23rd November, 1949); T. Menzies, O.B.E., M.B. (28th November, 1949); T. Young, O.B.E., M.B. (28th November, 1949); G. W. Lathbury, D.S.O., O.B.E. (14th December, 1949).

The following Brigadiers or Colonels to be temporary Major-Generals:—L. D. Grand, C.I.E., C.B.E. (19th September, 1949); J. M. S. Pasley, C.B.E., M.V.O. (26th October, 1949); C. S. Sugden, C.B., C.B.E. (4th November, 1949); J. M. MacFie, C.B.E., M.C., M.B. (28th November, 1949); S. W. Joslin, M.B.E., B.A., M.I.Mech.E., M.I.E.E. (1st January, 1950).

#### RETIREMENTS

The following General Officers have retired:—Major-General Sir F. R. Roy Bucher, K.B.E., C.B., M.C. (9th October, 1949), with the honorary rank of General (substituted for the entry in the November issue); Major-General W. R. Revell-Smith, C.B., C.B.E., D.S.O., M.C., A.M. (22nd November, 1949); General Sir Richard L. McCreery, G.C.B., K.B.E., D.S.O., M.C. (9th December, 1949); Major-General J. E. C. McCandlish, C.B., C.B.E. (14th December, 1949); Major-General J. C. A. Dowse, C.B., C.B.E., M.C., M.B., K.H.P. (26th December, 1949); Major-General D. A. L. Wade, C.B., O.B.E., M.C. (25th January, 1950).

#### DIRECTOR OF INFANTRY AND MILITARY TRAINING

An important change at the War Office gives new recognition to the fact that Infantry is the basic Arm, supported by the other Arms. The functions performed by the Director of Military Training and the Director of Infantry have been combined in the hands of one Director, in order that the right emphasis may be placed on the Infantry. The title of the appointment is Director of Infantry and Military Training, the first holder being Major-General C. M. Barber, previously Director of Infantry.

The Director is responsible for all matters connected with the development of infantry weapons and acts as adviser to the General Staff on infantry organization and staff duties. He pays personal visits to infantry units at home and overseas.

The change does not affect the functions of the Director-General of Military Training.

#### MILITARY EXERCISE IN STANFORD AREA

A military Exercise (Exercise *Victor*) to practise a Brigade Group consisting of two infantry battalions, with supporting arms, in a move by road and in operations against an "enemy" who had landed troops by air and sea, was held in and near the Stanford (Norfolk) practical training area in November.

The exercise, which was directed by the G.O.C., East Anglian District (Major-General M. S. Chilton) began on Monday, 21st November, and ended at approximately mid-day on Wednesday, 23rd November. Taking part were units of 29 Independent Infantry Brigade Group and the majority of the troops engaged were National Service men.

One of the objects of this exercise was to practise movement by motor transport on the road, and the road discipline shown seems to have been generally good for young soldiers of whom rather more than one-third were National Service men.

# SANDHURST OPENED TO NATIONAL SERVICE AND SHORT SERVICE OFFICERS

The War Office announced on 22nd December that the young officer who holds a National Service or Short Service Commission and wishes to make the Army his career is to have a better chance of obtaining a Regular Commission. The way through the Royal Military Academy, Sandhurst, is now open to him.

In the past he was disqualified for Sandhurst by the fact that he already held a Commission. In future, if he is 19½ or over he will be eligible on the same terms as a Regular soldier or National Service man still serving in the ranks.

During his course at Sandhurst he will be paid at the rate for the substantive or war-ubstantive rank held before he was commissioned.

# GRANT OF PERMANENT COMMISSIONS IN THE REGULAR ARMY TO UNIVERSITY GRADUATES

A scheme has been introduced by which a graduate, who has entered a university at a normal age, may be granted a permanent commission in the Regular Army with the same seniority as if he had entered the Royal Military Academy, Sandhurst, at the youngest permissible age.

The amount of seniority granted will vary with the class of degree and the subject in which it is obtained.

Parents can obtain full details of the scheme by written application to the War Office (A.G.I. Officers. E.), Whitehall, S.W.I, and graduates can obtain details from their Universities.

#### VACANCIES FOR EX-INDIAN ARMY OFFICERS IN R.A.F. REGIMENT

Short service commissions in the Royal Air Force Regiment are to be offered to a number of ex-regular Indian Army officers who are between the ages of 34 and 44 and have held the substantive rank of major.

Appointments will be for a period of six years on the active list, followed by four years on the Reserve of Air Force Officers. Gratuity at the rate of £100 for each year of service will be payable on transfer to the Reserve on satisfactory completion of the full period on the active list.

Under this scheme appointments will be in the rank of squadron leader and, while the possibility of promotion is not debarred, normally the whole period of service will be rendered in that rank. Former rank and service will be taken into account in determining the seniority to be offered.

Officers who are exceptionally suitable and are desirous of accepting permanent service with the R.A.F. Regiment may be considered for permanent commissions after

their acceptance under this scheme, but in that event it would be necessary to take into account the compensation, retired pay, etc., which they may have received from the Indian Government, and each case would have to be considered on its merits.

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The R.A.F. Regiment is primarily concerned with the local defence of R.A.F. air-fields and establishments against both ground attack and low-flying attack, and with improving the ground fighting efficiency of the R.A.F. and maintaining at a high standard the combat efficiency of all members of the Force on the ground. Armoured, light anti-aircraft and rifle squadrons are maintained at home and overseas. In addition, the Regiment provides opportunities for a small number of British officers to serve in native levies overseas. It also has administrative responsibilities in posts that do not require flying experience.

# REINFORCEMENTS BY AIR FOR WEST AFRICA

During this winter troop reinforcement between the United Kingdom and West Africa is being carried out by air instead of by surface transport. A privately owned charter company, Airwork, has been granted a contract for an initial period of six months.

The aircraft used are Vickers Vikings, which make a night stop at Gibraltar, carrying troops to Kano, Kaduna, Lagos, Accra, and Freetown. A minimum of four and a maximum of six trips a month have been agreed upon by the Treasury for carrying officers, other ranks, and their families. The time taken is three days on the outward journey, a day for refuelling, and three days for the return flight.

# Women's Royal Army Corps Regular Engagements

Recruits to the Women's Royal Army Corps are now able to enlist on either three or four year engagements. The initial enlistment has previously been for a minimum of four years. The age limits are 17½ to 30 and a wide variety of interesting trades and employments are open.

In addition, a new engagement for ex-Servicewomen has been introduced. This applies to women with at least one year's previous service in the A.T.S. or W.R.A.C. They may now re-enlist for two years. Acceptance will be normally dependent on the existence of a vacancy in the applicant's former trade or employment. Ex-Servicewomen must also have a military assessment of character not less than "good."

# TERRITORIAL ARMY

STRENGTH.—The total strength of the Territorial Army, including the Women's Royal Army Corps (T.A.) but excluding the Active Army regular cadre serving with T.A. units, at the end of October, November and December, 1949, was as follows:—

October ... 80,994 November ... 82,171 December ... 82,533

ATTENDANCE AT CAMPS.—The War Office has announced that 73,176 All Ranks T.A. attended Annual Camp during the period 1st April to 31st October, 1949.

#### WAR MEMORIALS

ROYAL CORPS OF SIGNALS.—The Princess Royal, Colonel-in-Chief, attended a Dedication Service held in St. Martin's Church at Catterick Camp on 18th December, and unveiled a Plaque to the memory of all ranks of the Royal Corps of Signals who gave their lives in the 1939–1945 War.

THE SOMERSET LIGHT INFANTRY (PRINCE ALBERT'S).—Lieutenant-General Sir John Swayne, Colonel of The Somerset Light Infantry, handed to the Church of St. Mary Magdalen at Taunton on 6th November, a Book of Remembrance. This book, forming part of the regimental war memorial, and containing the names of all officers and other ranks who gave their lives in the 1039-45 War, was dedicated by the Bishop of Bath and Wells.

THE BORDER REGIMENT.—A military band playing "John Peel," the regimental march of The Border Regiment, as the colour party carried the regimental colours aloft through Carlisle Cathedral from the high altar, was the climax to an impressive ceremony there on 4th November, when the Archbishop of York, Dr. Garbett, dedicated the new Border Regiment memorial chapel in the nave, and the Book of Honour containing the names of 1,111 members of the regiment who fell in the War.

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THE SOUTH STAFFORDSHIRE AND NORTH STAFFORDSHIRE REGIMENTS.—In Lichfield Cathedral on 6th November, the Bishop of Lichfield dedicated a lectern in memory of the officers and men of the South Staffordshire and the North Staffordshire Regiments and the Staffordshire Yeomanry who gave their lives in the 1939-45 War.

THE DORSETSHIRE REGIMENT.—The Book of Remembrance, in memory of all members of The Dorsetshire Regiment who gave their lives in the 1939-45 War, was dedicated and the memorial regimental crest was unveiled in Sherborne Abbey on Sunday, 4th December. The service was conducted by the Rev. S. B. Wingfield Digby, and an address was given by the Chaplain-General to the Forces.

ROYAL ARMY ORDNANCE CORPS.—General Sir Sidney Kirkman, Quartermaster-General to the Forces, unveiled at Minden Barracks, Deepcut, Hants, on 6th November, the R.A.O.C. war memorial erected in memory of 3,557 members of the corps who lost their lives in the late war and that of 1914–18.

THE 3RD/4TH COUNTY OF LONDON YEOMANRY (SHARPSHOOTERS) AND THE 44TH ROYAL TANK REGIMENT.—General Sir Richard McCreery, Honorary Colonel, took the salute at a march past of the 3rd/4th County of London Yeomanry (Sharpshooters) and old comrades, on the Horse Guards parade on 20th November. The march past followed a service at St. Martin-in-the-Fields, at which the Rev. Christopher Perowne, chaplain to the 3rd Sharpshooters in the Western Desert, dedicated a book of remembrance to the 381 Sharpshooters who lost their lives in the campaigns in Africa, Sicily and Italy and North-West Europe during the late war.

By a coincidence, the 44th Royal Tank Regiment, which was brigaded with the 3rd Sharpshooters from Sicily to the Baltic, were unveiling their war memorial at a service in Bristol on the same day.

THE ESSEX YEOMANRY.—In a dual ceremony at Chelmsford on 6th November, the 304 Field Regiment, R.A. (Essex Yeomanry), T.A., were presented with a new guidon to replace the one destroyed in an air raid in 1943, and a memorial tablet commemorating those who gave their lives in the War was unveiled in Chelmsford Cathedral. The memorial tablet, beneath which in a glass case is a book containing the names of the fallen, was unveiled by General Sir Miles Dempsey, and was consecrated by the Bishop of Chelmsford.

51ST H.A.A. REGIMENT.—A memorial tablet, on which are inscribed the names of the 93 men of the 51St Heavy Anti-Aircraft Regiment, R.A. (T.A.), who fell in the 1939-45 War, was unveiled in the drill hall of the Duke of York's Headquarters, Chelsea, on 23rd October, by Field-Marshal Lord Alanbrooke, the Master Gunner.

9TH BATTALION THE DURHAM LIGHT INFANTRY.—At a ceremony on 5th November, the Colours of the 9th Battalion The Durham Light Infantry were laid up in St. Mary's Church, Gateshead. On the same day a memorial to those of the unit who lost their lives in the War was dedicated,

#### MISCELLANEOUS

TOUR OF THE SECRETARY OF STAME FOR WAR.—Mr. E. Shinwell left this Country by air on 22nd November on a week's tour of inspection of troops in Middle East Command. During this period he visited Tripolitania, Benghazi, Tobruk, the Canal Zone, Akaba and Cyprus. He returned to England via Athens.

Tours of the C.I.G.S.—Field-Marshal Sir William Slim visited Canada and the United States during November and December. He arrived in Ottawa by air on 23rd November, and left by air for the United States on 26th November, on an eight-day visit.

THE SOVEREIGN'S PARADE AT SANDHURST.—The Sovereign's Parade of graduate officer cadets at the Royal Military Academy, Sandhurst, was taken on 15th December by Field-Marshal Sir William Slim, on behalf of the King.

R.A. BATTERIES RETURN FROM EUROPE.—The two H.A.A. Batteries, the 158th and the 209th, which have been training Belgian and Dutch units under the Western Union defence scheme landed at Harwich on 24th November, after a six-months stay on the Continent.

A detachment of 51 Officers and N.C.O.s of the Royal Netherlands Army visited England between 16th and 19th January, and carried out firing practice on the Weybourne A.A. range in Norfolk.

THE ROYAL HAMPSHIRE REGIMENT.—Portsmouth City Council decided on 13th December to honour the Royal Hampshire Regiment by granting it the right to march through the City with bayonets fixed and Colours flying.

AWARD TO INVENTOR.—The Royal Commission on Awards to Inventors announced on 26th November that a payment of £17,500 would be made to M. Rudolf Gundlach, a Pole resident in France, in respect of the Crown manufacture or use after 16th May, 1941, of his invention concerning periscopes and episcopes in tanks. This payment is in addition to £63,224 already paid for Crown use of the invention before that date.

# DOMINIONS AND COLONIES CANADA

ADJUTANT-GENERAL.—Major-General W. H. S. Macklin, C.B.E., former Vice-Adjutant-General, was appointed Adjutant-General last August vice Major-General E. G. Weekes, C.B., C.B.E., M.C., M.M., retired.

Newfoundland.—For military purposes the island province has become an area of the Army's Eastern Command. During Christmas week, 1949, His Majesty the King honoured the Newfoundland Regiment with the right to use the prefix "Royal," and it is now the Royal Newfoundland Regiment.

ROYAL MILITARY COLLEGE, KINGSTON AND ROYAL ROADS, VICTORIA.—It was announced last year that more than 70 scholarships, cadetships and bursaries were available for either College. They included 15 cadetships offered each year by the Dominion Government on the basis of not more than five to each of the three Services, providing tuition, recreation fee and uniform expenses for the first academic year.

Training at Universities.—Twenty-one other ranks, selected for commissioned rank, were sent to various Canadian Universities last Autumn at public expense. While at a University, they will be required to take the full training of the Canadian Officers' Training Corps, including the 16-week practical training phase each Summer.

RESERVE FORCE TRAINING.—Some 10,200 Reserve Force soldiers attended Summer training camps last Summer—an increase of more than 3,000 over the 1948 total. Of this number more than 4,000 passed through the intricate training mill under Central Command at Petawawa.

Re-engagements.—Of the thousands of soldiers who completed their term of engagement during 1949, no less than 97 per cent. re-engaged to make a career of Service life.

STRENGTH.—The strength of the Army on 3rd December, 1949, was 20,244—an increase of more than 2,200 officers and men in less than twelve months.

AID TO CIVIL AUTHORITIES.—At Vancouver recently troops threw up Bailey bridges to replace permanent structures washed away by flooded rivers.

QUEBEC FORTIFICATIONS.—The renovation of one of Canada's oldest fortifications, the ancient Citadel of Quebec City, started last Summer. Completion of the elaborate modernization scheme is expected to give Quebec's only Active Force infantry unit, the Royal 22nd Regiment, a barracks unequalled anywhere in the World.

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ĺ. a CADETS.—An enlarged programme of special trades training for Royal Canadian Army Cadets was announced in 1949. Under this scheme some 1,500 cadets—an increase of 1,325 over the 1948 total, attended special cadet trades training camps across Canada for six-week courses in auto mechanics, signal inter-communication, radar, the operating of special engineering equipment, and as medical assistants.

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# AUSTRALIA

ARMY STAFF COLLEGE.—Brigadier A. R. Garrett, C.B.E., has been appointed Commandant of the Army Staff College at Queenscliff, Victoria.

Training facilities at the Staff College have been extended to other countries. About thirty Australian candidates are attending with two representatives from Britain, one from Canada, and one from Pakistan. Under the reciprocal arrangement Australia has sent three representatives to England for training at Camberley, one to Canada for training at Kingston, and one to Pakistan for training at Quetta.

Australian Representative in London.—Colonel H. C. F. Harlock has replaced Brigadier E. W. Woodward, D.S.O., O.B.E., who has been appointed Deputy Adjutant-General at Australian Army Headquarters.

REGULAR ARMY SPECIAL RESERVE.—The Australian Army is seeking 500 unmarried serving members, or ex-servicemen, for full-time enlistment for general duties in the Regular Army Special Reserve, so that younger Australian Regular Army soldiers can be released for training. Enlistees, who will be employed as clerks, storemen, mess stewards and office orderlies, will be required to be between the ages of 40 and 54. They will be engaged for three years, with compulsory discharge at 57.

# PAKISTAN

Brigadier F. H. B. Ingall—Commandant, Pakistan Military Academy, has written for the information of officers of the British and late Indian Armies who served in Waziristan, explaining the use to which much of the movable property of the Razmak and Wana Brigade messes and the Razmak Club has been put.

The withdrawal from Waziristan in the Winter of 1947–48 coincided with the raising of the Pakistan Military Academy. The then commanders of the Razmak and Wana Brigades and the president of the Razmak Club thereupon presented all their glass, crockery, carpets, pictures, and furniture to the military academy. The staff and cadets would like all direct and indirect donors who may have served in Waziristan to know that their gifts are greatly appreciated and cherished. The crests of the Razmak and Wana Brigades are erected in two of the cadet messes and the rooms are known as the Razmak and Wana Brigade ante-rooms respectively.

The most treasured gift is the collection of crests of British and Indian units which used to hang in the Razmak Club and the brass quarter-guard plaques of some of the British regiments which served in Razmak. With the permission of the Colonels of the Regiments concerned, all the badges have been retained in the Academy.

Brigadier Ingall says that these gifts have contributed greatly toward the comfort and the proper furnishing of the messes and the main buildings. The spirit in which they have been given and the good will expressed augur well for the future relations of the British and Pakistan armies.

#### INDIA

The Territorial Army of India, with a target strength of 130,000, was inaugurated in New Delhi on 9th October, 1949, by the Governor-General—Mr. Rajagopalachari, who explained that it would be a balanced Force of all arms, and that it would be open to all citizens irrespective of communal or creed restrictions.

The Territorial Army will be responsible for A.A. and Coastal defence, will reinforce the Regular Army in time of war, will relieve the Regular Army in an emergency of its internal security commitments, either in part or whole, and will enable Indian youth to receive part-time military training.

# FOREIGN BULGARIA

General Ivan Kinov, Chief of the Bulgarian General Staff, and General Boyan Bulgaranov, head of the Army Political Department, were relieved of their posts on 30th October by a decree of the Presidium of the National Assembly. The appointment of Lieut.-General Grekov as Chief of General Staff was announced on 26th November, 1949.

# FRANCE

APPOINTMENTS.—The following appointments were announced on 7th December, 1949:—

General Blanc as Chief of the Army General Staff in the place of General Revers.

General Koenig as Inspector-General of the French Armed Forces in North Africa.

Acquittal of French Officers.—General Guillemet, General Benoiton, and Colonel Guiberteaux were acquitted by a military court in Paris on 5th November, on charges of destroying ammunition, stores, and means of communication during the British occupation of Madagascar in 1942. The accused argued that they had acted according to the spirit of their instructions.

#### **GERMANY**

Short-term exchanges of officers and non-commissioned officers in the British and American occupation forces in Germany began again in January. Infantry, artillery, tank, engineering, and signal units each send a company commander or an officer of higher rank, and an N.C.O. in the grade of sergeant or above, for one week's visit to a corresponding unit for instruction on training and equipment.

#### GREECE

WITHDRAWAL OF BRITISH FORCE.—The Government's decision to withdraw British forces from Greece was announced by Mr. Mayhew—Under Secretary, Foreign Office, in the House of Commons on 31st October. The withdrawal commenced during the last week of November

Resignation of C.-In-C.—Field-Marshal Papagos resigned from his post as Commander-in-Chief on 5th January. The Minister of War—Mr. Canellopoulos, and General Kosmos, Chief of the General Staff, also resigned. The resignation of the whole Greek Government took place on the same day.

#### ISRAEL

Mr. Ben-Gurion, the Israeli Premier, announced on 9th November that Brigadier Yaacov Dori, Chief of the General Staff of the Israeli Army and a former Haganah leader, had retired for health reasons, and had been succeeded by Colonel Yigal Yadin, former Chief of Operations.

#### POLAND

A simultaneous announcement from Warsaw and Moscow on 7th November, 1949, stated that the Soviet Government, at the request of President Beirut, had placed Marshal Konstantin Rokossovsky at the disposal of the Polish Government for service with the Polish Army, and that he would serve as Minister of National Defence in the Polish Government, succeeding Marshal Rola-Zymierski. The Warsaw communiqué said that President Bierut had made this request in view of the fact that Marshal Rokossovsky was a Pole by birth, and because of his popularity with the Polish people. Marshal Rokossovsky arrived in Warsaw the same day, was appointed a Marshal of Poland and C.-in-C. of the Polish Army, and, on 8th November, took his seat in the Sejm as Minister of National

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n o ll Defence, the Prime Minister announcing that he had assumed Polish citizenship. Marshal Rokossovsky was born in 1896, and distinguished himself in the recent War by his defence of Stalingrad.

#### SIAM

The Chief of the General Staff of the Siamese Army, Lieutenant-General D. Dejpradiyudh, accompanied by Major-General Vichien Sutan, Director of Arsenal, Major-General K. Chamnong Bhumivet, Director of Welfare Department, and Colonel T. Upathambhananda, Deputy Surgeon General, visited this Country from 27th October to 15th November, 1949.

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The party visited military establishments during their stay here.

#### UNITED STATES

WIND TUNNEL.—It was reported from Washington on 29th October, 1949, that the United States Army is using a wind tunnel which can produce speeds ten times that of sound. It is being used to help to develop types of rockets, which could cross the Atlantic from New York to London in less than 30 minutes.

The Defence Department, announcing this, said that the tunnel was at the California Institute of Technology at Pasadena. It was the first time, the announcement added, that American scientists had produced speed of more than ten times that of sound. The highest previous known speed of air flow in supersonic wind tunnels was about seven times the speed of sound, which is 760 miles an hour at sea level.

Miniature models of the rockets and guided missiles to be tested will be mounted in a space only 5 in. by 5 in. in the 4 ft. long tunnel and subjected to a blast of air travelling at 7,600 miles an hour. The air comes from a slit, the thickness of a sheet of paper, in the throat of a specially designed steel alloy nozzle. When the air expands into the test chamber the temperature drops to about 430 deg. below zero (Fahrenheit) and the pressure drops to about one millimetre of mercury, or one-thousandth of normal atmospheric pressure, the Army said.

GUIDED MISSILES AND ROCKETS.—The Defence Department said that a guided missile, designed with the aid of the new tunnel, could take off from San Francisco and arrive at Sydney—a distance of about 7,600 miles—in about an hour.

The previous fastest officially reported speed—of 5,200 miles an hour, 120 miles an hour less than seven times the speed of sound—was attained by the first successful "double-barrelled" rocket fired by the United States Army Ordnance Department last February. The department then mounted a small rocket in the nose of a German V-2 rocket (which has a speed of 3,400 miles an hour). From the nose of this larger rocket at its maximum speed the smaller one was launched and set a new altitude record of 250 miles.

AIR NOTES
GREAT BRITAIN

H.M. THE KING

On Wednesday, 7th December, 1949, His Majesty the King, accompanied by the Queen, reviewed at Buckingham Palace the contingents of the R.A.F., W.R.A.F. and U.S.A.F. and Dominion Air Force personnel who took part in the march through London to commemorate the Berlin air lift.

Others taking part in the Parade were representative parties of B.A.O.R., United States Forces, British airline corporations and civil charter companies, the Control Commission for Germany and Welfare Services.

# HONOURS AND AWARDS

The following awards were included in the New Year Honours List published on 2nd January, 1950:—

K.C.B.—Air Marshal Sir Alec Coryton, K.B.E., C.B., M.V.O., D.F.C.; Air Marshal Sir Hugh W. L. Saunders, K.B.E., C.B., M.C., D.F.C., M.M.

C.B.—Air Vice-Marshal D. V. Carnegie, C.B.E., A.F.C.; Air Vice-Marshal E. J. Kingston-McCloughry, C.B.E., D.S.O., D.F.C.; Air Vice-Marshal T. C. St. C. Morton, O.B.E., M.D., Ch.B., F.R.C.P., D.P.H., D.P.M., D.T.M. and H., K.H.P.; Air Vice-Marshal C. B. R. Pelly, C.B.E., M.C.; Air Vice-Marshal C. B. S. Spackman, C.B.E., D.F.C.; Acting Air Vice-Marshal L. J. V. Bates, C.B.E.; Air Commodore J. F. Titmas, C.B.E., A.F.R.Ae.S.; Group Captain J. O. W. Oliver, D.S.O., D.F.C.

K.B.E.—Air Vice-Marshal A. P. Davidson, C.B., C.B.E.; Air Vice-Marshal A. L. Paxton, C.B., C.B.E., D.F.C.

C.B.E.—Acting Air Commodores J. Marson; H. M. Massey; J. W. Moncur, M.I.C.E.; W. P. G. Pretty, O.B.E.

#### APPOINTMENTS

AIR MINISTRY.—Air Commodore D. H. F. Barnett, C.B.E., D.F.C., A.D.C., to be Director of Operations, vice Air Commodore F. W. Long, C.B. (November, 1949).

Air Commodore J. W. F. Merer, C.B., to be Director of Navigation and Control, vice Air Commodore N. H. D'Aeth, C.B.E. (November, 1949).

Air Commodore L. W. Cannon, C.B.E., to be Director of Organization (Establishments), vice Air Commodore J. R. Whittey, C.B., C.B.E., D.S.O., A.F.C. (December, 1949).

The Reverend H. L. O. Rees to be Assistant Chaplain-in-Chief, vice the Reverend C. J. F. Gilmore (1st January, 1950).

Air Vice-Marshal C. W. Weedon, C.B., C.B.E., to be Director-General of Engineering, Air Ministry, vice Air Vice-Marshal K. M. St. C. G. Leask, C.B., M.C. (2nd January, 1950).

Air Commodore J. MacC. Kilpatrick, to be Deputy Director-General of R.A.F. Medical Services, vice Air Commodore W. E. Barnes (January, 1950).

Air Commodore N. C. Ogilvie-Forbes, O.B.E., to be Assistant Chief of the Air Staff (Intelligence) with the acting rank of Air Vice-Marshal, vice Air Vice-Marshal L. F. Pendred, C.B., M.B.E., D.F.C. (18th January, 1950).

Air Commodore H. V. Satterly, C.B., C.B.E., D.F.C., to be Director of Operational Requirements, vice Air Commodore G. W. Tuttle, C.B., O.B.E., D.F.C. (January, 1950).

Air Commodore G. Scarrott to be Director of Equipment (B), vice Air Commodore G. L. Worthington, C.B.E. (January, 1950).

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bleary. hich num Group Captain F. E. Lipscombe, to be Director of Hygiene and Research, Air Ministry, with the acting rank of Air Commodore, vice Air Commodore J. MacC. Kilpatrick (January, 1950).

MINISTRY OF SUPPLY.—Air Commodore A. W. B. McDonald, C.B., A.F.C. to be Officer Commanding the Aeroplane and Armament Experimental Establishment under the Ministry of Supply, vice Air Commodore H. L. Patch (January, 1950).

UNITED KINGDOM.—Group Captain D. N. Roberts, O.B.E., A.F.C., to be President of the R.A.F. Selection Board, Andover, with the acting rank of Air Commodore, vice Air Commodore H. M. Massey, D.S.O., M.C. (October, 1949).

The Reverend F. D. Morley, B.D., to be an Honorary Chaplain to the King, vice the Reverend W. R. Marsh, B.D. (31st October, 1949).

Air Vice-Marshal F. F. Inglis, C.B., C.B.E., to be Senior Air Staff Officer, Flying Training Command, vice Air Vice-Marshal F. J. Fogarty, C.B., D.F.C., A.F.C. (November, 1949).

Air Commodore P. Jones, to be Commanding Officer R.A.F. Central Signals Establishment, vice Air Commodore L. Dalton-Morris, C.B.E. (November, 1949).

Group Captain J. N. T. Stephenson to be Commandant of the R.A.F. Staff College, Andover, with the acting rank of Air Commodore, vice Air Commodore L. W. Cannon, C.B.E. (November, 1949).

Air Commodore (acting Air Vice-Marshal) G. S. Hodson, C.B., C.B.E., A.F.C., to be Senior Air Staff Officer, Reserve Command, retaining his present acting rank, vice Air Vice-Marshal R. O. Jones, C.B., A.F.C. (30th December, 1949).

Air Vice-Marshal R. O. Jones, C.B., A.F.C., to be Air Officer Commanding, No. 24 Group, Technical Training Command, vice Air Vice-Marshal L. G. Harvey, C.B. (31st December, 1949).

Group Captain C. J. Nobbs to be Senior Air Staff Officer, No. 41 Group, Maintenance Command, with the acting rank of Air Commodore, vice Air Vice-Marshal H. J. Roach, C.B., C.B.E., A.F.C. (December, 1949).

Air Vice-Marshal L. G. Harvey, C.B., to be Senior Air Staff Officer, Technical Training Command, vice Air Vice-Marshal C. W. Weedon, C.B., C.B.E. (2nd January, 1950).

Air Vice-Marshal W. L. Dawson, C.B., C.B.E., D.S.O., to be Royal Air Force Instructor at the Imperial Defence College, vice Air Vice-Marshal R. Ivelaw-Chapman, C.B., C.B.E., D.F.C., A.F.C. (9th January, 1950).

Air Commodore W. E. Barnes, M.R.C.S., L.R.C.P., to be Principal Medical Officer, Technical Training Command, with the acting rank of Air Vice-Marshal, vice Air Vice-Marshal D. McLaren, C.B.E., M.C., Ch.B., K.H.S. (9th January, 1950).

Air Commodore T. G. Pike, C.B., C.B.E., D.F.C., to be Air Officer Commanding No. 11 Group, Fighter Command, with the acting rank of Air Vice-Marshal, vice Air Vice-Marshal S. F. Vincent, C.B., D.F.C., A.F.C. (9th January, 1950).

Air Vice-Marshal L. F. Pendred, C.B., M.B.E., D.F.C., to be Commandant of the School of Land/Air Warfare, vice Air Vice-Marshal W. L. Dawson, C.B., C.B.E., D.S.O., (21st January, 1950).

Air Vice-Marshal E. J. Kingston-McCloughry, C.B., C.B.E., D.S.O., D.F.C., to be Air Officer Commanding No. 38 Group, Transport Command, vice Air Vice-Marshal A. C. H. Sharp, D.S.O., A.F.C. (25th January, 1950).

Air Commodore D. F. W. Atcherley, C.B.E., D.S.O., D.F.C., to be Senior Air Staff Officer, Fighter Command, with the acting rank of Air Vice-Marshal, vice Air Vice-Marshal, E. J. Kingston-McCloughry, C.B., C.B.E., D.S.O., D.F.C. (21st January, 1950).

Air Commodore A. R. Wardle, C.B.E., A.F.C., to be Air Officer Commanding No. 66 (Scottish Reserve) Group, vice Air Commodore E. S. Burns, C.B.E. (shortly).

Air Commodore L. F. Sinclair, G.C., C.B., C.B.E., D.S.O., to be Assistant Commandant of the R.A.F. Staff College, Bracknell, vice Air Commodore H. V. Satterly, C.B., C.B.E., D.F.C. (January, 1950).

Western Europe.—Group Captain J. R. Hallings-Pott, C.B.E., D.S.O., A.F.C., to be Deputy Chief of Staff (Air Defence) at Headquarters Air Forces of Western Europe, with the acting rank of Air Commodore (November 1949).

B.A.F.O.—Air Vice-Marshal Sir Harry Broadhurst, K.B.E., C.B., D.S.O., D.F.C., A.F.C., to be Senior Air Staff Officer, British Air Forces of Occupation, Germany, vice Air Vice-Marshal C. B. S. Spackman, C.B.E., D.F.C. (January, 1950).

MIDDLE EAST.—Air Commodore F. W. Long, C.B., to be Senior Air Staff Officer at Middle East Air Force Headquarters, with the acting rank of Air Vice-Marshal, vice Air Vice-Marshal G. Combe, C.B. (December, 1949).

Air Commodore L. Dalton-Morris, C.B.E., to be Chief Signals Officer at Headquarters, Middle East Air Force, vice Air Commodore C. P. Brown, C.B., C.B.E. (December, 1949).

Foreign.—Group Captain R. J. Legg to be Air Attaché at Ankara with the acting rank of Air Commodore (January, 1950).

Group Captain I. C. Bird to be Air Attaché at Moscow with the acting rank of Air Commodore, vice Air Commodore N. C. Ogilvie-Forbes, O.B.E. (January, 1950).

Air Marshal Sir Harold Whittingham, K.C.B., K.B.E., LL.D., F.R.C.P., F.R.C.S.(E), has accepted the invitation of the Secretary of State for Air to become Chairman of the Flying Personnel Research Committee, in succession to Sir Edward Mellanby, G.B.E., K.C.B., M.A., LL.D., F.R.C.P., F.R.S., who has been Chairman of the Committee since it was formed ten years ago.

#### PROMOTIONS AND RETIREMENTS

The following were among the half-yearly promotions, with effect from 1st January, 1950:—

Air Vice-Marshal to Air Marshal.—T. M. Williams, C.B., O.B.E., M.C., D.F.C. (Acting Air Marshal).

Air Commodore to Air Vice-Marshal.—Acting Air Vice-Marshals R. A. George, C.B., C.B.E., M.C.; A. P. Ledger, C.B.E.; P. H. Mackworth, C.B., C.B.E., D.F.C.; J. A. Gray, C.B., C.B.E., D.F.C., G.M.; G. S. Hodson, C.B., C.B.E., A.F.C.; W. J. Seward, C.B.E.; Air Commodores F. W. Long, C.B.; G. R. C. Spencer, C.B.E.; F. J. Fressanges, C.B.

Group Captain to Air Commodore.—C. H. Flinn, C.B.E.; J. M. Cohu, C.B.E.; J. H. Edwardes-Jones, C.B.E., D.F.C., A.F.C.; D. H. F. Barnett, C.B.E., D.F.C., A.F.C.

TECHNICAL BRANCH

Air Commodore to Air Vice-Marshal.—C. N. H. Bilney, C.B., C.B.E. (Acting Air Vice-Marshal).

Group Captain to Air Commodore.-G. Silyn-Roberts, C.B.E., A.F.C.

EQUIPMENT BRANCH

Group Captain to Air Commodore.-C. W. Gore, O.B.E.

MEDICAL BRANCH

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Group Captain to Air Commodore.—V. S. Ewing, M.B., Ch.B., D.P.H.; J. C. Neely, M.B., D.M., B.Ch., M.R.C.S., L.R.C.P., D.O.M.S., D.O.(Oxon.).

LEGAL BRANCH

Group Captain to Air Commodore. - J. B. Walmsley, C.B.E., D.F.C.

Air Commodore A. MacGregor, C.B., C.B.E., D.F.C., promoted to the rank of Air Vice-Marshal and placed on the retired list (9th September, 1949).

Air Commodore K. B. Lloyd, C.B., C.B.E., A.F.C., promoted to the rank of Air Vice-Marshal and placed on the retired list (28th October, 1949).

The Rev. W. R. Marsh, B.D., placed on the retired list (31st October, 1949).

The Rev. C. J. F. Gilmore, Assistant Chaplain-in-Chief, placed on the retired list (1st January, 1950).

#### ORGANIZATION

OVERSEAS COMMANDS.—The title of the Air Officer Commanding-in-Chief, British Air Forces of Occupation, Germany, has been changed to Commander-in-Chief, to bring it into line with the title borne by the Commanders-in-Chief of the two other overseas commands—the Far East Air Force and the Middle East Air Force.

R.A.F. GLIDING AND SOARING ASSOCIATION.—A Gliding and Soaring Association has been formed so that all ranks may learn at a cost in keeping with the pocket of the most junior airman. Flying membership at first will be limited to those holding gliding qualifications but, when instructors have been trained, it will be extended to less qualified members. It is hoped that a R.A.F. station will provide the association's first gliding site, but that when the Association is firmly established, a site for its exclusive use will be obtained, complete with hangarage, maintenance facilities, club-house and other amenities.

President of the Association is Air Marshal T. M. Williams, Commander-in-Chief, B.A.F.O. Chairman and honorary secretary respectively are Group Captain G. J. C. Paul and Squadron Leader D. Martin Butcher, both of the Air Ministry, and the chief flying instructor is Flight Lieutenant R. C. Forbes, officer commanding the recently opened Reserve Command Gliding Instructor's School at R.A.F. Station, Detling, Kent. Further information concerning the Association may be obtained from Squadron Leader D. Martin Butcher, Air Ministry (O.F.I), Room 312, Bush House (S.E.), Strand, W.C.2.

"Search and Rescue" Radio Watch.—Certain R.A.F. Stations are to keep an additional all-round-the-clock listening watch in future on the wireless frequency used by civil and other aircraft for international aeronautical distress calls. Many searching R.A.F. and R.N. vessels will also be able to listen out for international air distress calls. This is in addition to the listening watch for S.O.S. calls which they already keep on the international maritime distress frequency used by shipping, and a further watch which some can maintain continuously on the frequency used by R.A.F. aircraft for navigation wireless calls.

AERONAUTICAL INSPECTION SERVICES IN THE FAR EAST.—This group of officers and airmen are considered to contribute largely to the low accident rate of the Far East Air Force. The greater part of their work is pre-use inspection and testing of every job of repair work, and is carried out at the R.A.F. Maintenance Base, Seletar, Singapore. In addition to the inspection of repairs effected, items of equipment held in stores, as well as ammunition, all types of explosives, petroleum products, oils and lubricants are subject to inspection and test.

# PERSONNEL

R.A.F. COLLEGE, CRANWELL.—On 14th December last, Field-Marshal Sir William Slim, G.B.E., K.C.B., D.S.O., M.C.—C.I.G.S., reviewed No. 48 Entry on completion of their course, and subsequently presented the prizes.

Memorial Books.—On 8th November, Memorial Books of Nos. 2 and 5 Groups, Royal Air Force, containing the names of 21,000 air crew lost on operational missions against Germany during the War, were dedicated by the Lord Bishop of Lincoln, and consigned to the care of the Cathedral Body.

BOROUGH FREEDOM.—Bridgnorth, Shropshire, is to give the freedom of the Borough to the R.A.F. Station, Bridgnorth. This is the first occasion when the freedom of right of entry has been conferred on any R.A.F. Station.

Dress,—An Air Ministry order stated that the dress for all airmen for ceremonial occasions and walking-out is service dress with brass buttons and belt-buckle. In no circumstances are airmen to wear No. 2 (home) dress while on leave or pass.

GORDON SHEPHARD MEMORIAL PRIZE ESSAY COMPETITION, 1949-50

The following is the subject for the above-named Competition:-

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"The effectiveness and striking power of an Air Force is directly related to the degree of efficiency achieved in the use of its men, equipment and training time. Discuss this theme and suggest any means by which, in your view, the efficiency and striking power of the Royal Air Force can be increased without increasing its proportionate call on National resources."

The rules for the Essay Competition will be found in Air Ministry Order No. N.1047 of 1949.

# WOMEN'S ROYAL AIR FORCE

EDUCATION OFFICERS.—The first women to be appointed direct from civil life to short service Commissions in the Royal Air Force Education Branch passed out on 3qth November, from the W.R.A.F. Officer Cadet Training Unit, Hawkinge, following a three-month course. After a short course in educational organization and administration at the R.A.F. School of Education, they take up their duties at R.A.F. Stations and training schools.

There are still vacancies for women education officers, who must be university graduates or otherwise entitled to recognition as qualified teachers. The chief demand is for women with scientific or mathematical qualifications.

Secretarial Officers.—The Secretarial Branch of the Royal Air Force which covers a diversity of highly specialized duties, including administration, intelligence, code and cypher, accounts, personnel selection and photographic interpretation, is open to women as well as men.

DRESS.—A beret, similar to that worn by R.A.F. officers, has been introduced for wear by the Women's Royal Air Force officers. The beret, of blue grey woollen material, with a gilt eagle and crown badge, may be worn with working dress of serge battledress blouse and skirt.

#### MATERIAL

STANDARD COCKPIT CONTROL KNOBS.—In order to simplify the work of the pilot, all new aircraft designed for the Royal Air Force from now onwards must incorporate cockpit knobs of standardized shapes. The effect of this decision will not be seen for some years, when aircraft now in the development stage reach the squadrons.

In future, the major control knobs in the cockp it must be of distinctive specified shapes instead of shapes selected by the aircraft manufacturing firm. Thus all flap control knobs will by uniform-sized spheres with small cylindrical projections each side, the supercharger control will be a  $\frac{3}{4}$ -in. cube, and the mixture control will be a disc with small pyramids on the rim. These shapes, and others for other controls, were selected after a series of tests conducted by the R.A.F. Institute of Aviation Medicine to find those which could readily be identified by feel alone. Emergency controls, such as those for working ejection seats or fire extinguishers, will have diagonal yellow and black stripes to make them more conspicuous.

The main benefit resulting from this standardization will be that whatever type of aircraft a pilot has to fly, he will know that a control knob of a particular shape performs a particular function. At present most aircraft knobs are spherical and give no indication of what will happen when they are moved. One effect of the change will be to reduce the risk of accidents caused through a pilot moving the wrong knob by mistake.

New Wrist Watches for Navigators.—A new highly-accurate wrist watch has been introduced into the R.A.F. for the exclusive use of air navigators. This new watch, known as the Mark 11 Navigator Wrist Watch, is of the highest grade obtainable in quantity production. They are tested and serviced by the Chronometer Department of the Royal Greenwich Observatory, Hurstmonceux Castle, Sussex.

#### SPECIAL FLIGHTS AND EXERCISES

ANTARCTIC FLIGHT.—The R.A.F. Antarctic Flight, comprising two officers, three N.C.O's and two Auster Mk. 6 aircraft, is taking part in the joint British-Scandinavian scientific expedition to the Antarctic. This is the first time the R.A.F. will have flown in the Antarctic. The purpose of the Flight is to find a passage through the pack-ice for the ship and to select suitable advanced bases on the Atlantic mainland. The unit will give the R.A.F. an opportunity to enlarge its knowledge and experience of polar-flying, particularly in relation to the effects of climate and magnetism, and to try out many items of Service equipment in cold climates.

WESTERN UNION ARMAMENT DEMONSTRATION.—28 aircraft of the Western Union Air Forces, all British built, took part in an armament demonstration at Orleans on Friday. 28th October.

#### RESERVE FORCES

RECRUITING.—The R.A.F.V.R. is to recruit members outside the British Isles for the first time since it was formed in 1937. British subjects who are ex-service and serving in a civilian capacity in the British Zone of Germany, may volunteer for the R.A.F.V.R. through Headquarters, B.A.F.O. There will be no flying branch, although former General Duties officers and air crew will be acceptable for ground duties. Volunteers accepted for the R.A.F.V.R. or W.R.A.F.V.R. in Germany will be required to do fifteen days' training a year at Regular R.A.F. Stations in the British Zone.

AIR ADVISORY COMMITTEE OF TERRITORIAL AND AUXILIARY FORCES ASSOCIATIONS.— The first meeting of this new Committee of the Council of Territorial and Auxiliary Forces Associations was held on 19th January, and has been set up as a liaison body between the Council and the Air Ministry, containing representatives of both sides. In particular, it will advise the Air Council on questions affecting the Auxiliary and Reserve Forces.

The present membership of the Committee is as follows:-

#### Air Ministry members:

The Air Member for Personnel, Air Marshal Sir Leslie N. Hollinghurst, K.C.B., K.B.E., D.F.C. (Chairman).

The A.O.C.-in-C., Reserve Command, Air Marshal R. M. Foster, C.B., C.B.E., D.F.C.

# Council of T.A.F.A. Members:

The Rt. Hon. the Earl of Limerick, K.C.B., D.S.O., T.D.

Air Marshal Sir Robert Saundby, K.B.E., C.B., M.C., D.F.C., A.F.C.

Air Marshal Sir John Baldwin, K.B.E., C.B., D.S.O.

Major-General the Viscount Bridgeman, C.B., D.S.O., M.C., D.L.

Sir Herbert Creedy, G.C.B., K.C.V.O.

Air Vice-Marshal G. H. Ambler, C.B., C.B.E., A.F.C.

Group Captain A. S. W. Dore, C.B., D.S.O., T.D., D.L.

Air Chief Marshal Sir Richard E. C. Peirse, K.C.B., D.S.O., A.F.C.

# FLIGHTS FOR CADETS

Regular flights by members of the Air Training Corps and the R.A.F. Section of the Combined Cadet Force to Germany, Pakistan, India, the Middle East and the Far East began in December. About forty cadets will fly each month on scheduled services of R.A.F. Transport Command, and serve in the aircraft as Assistant Air Quartermasters. To qualify for flight, cadets must hold the Proficiency Certificate and intend to make the Royal Air Force their career.

#### DOMINIONS .

### CANADA

SILVER JUBILEE OF R.C.A.F.—1949 marked the 25th Anniversary of the Royal Canadian Air Force, and on 1st April all ranks paused for a moment to look back over

the last quarter-century, and the occasion was marked by special ceremonies at Air Force stations.

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ALL-WEATHER JET FIGHTER.—The first test flight of the CF-100, the new all-weather jet fighter being built for the R.C.A.F., is expected to take place early this year.

#### AUSTRALIA

R.A.A.F. Flag.—On 10th September, the new flag of the Royal Australian Air Force was flown publicly for the first time over the Exhibition Buildings at Melbourne. The Service Ensign is the blue Australian flag with the R.A.A.F. roundel superimposed on the lower outfield.

REVIEW.—A review of present and planned developments in the Royal Australian Air Force was given in the House of Representatives in October by the Minister for Air, the Hon. A. S. Drakeford. The Government has increased the five years' allocation for the R.A.A.F. from (A62,500,000 to (A80,000,000).

The approved programme provided for a static organization for the home defence of Australia, and for a group of task force elements which, in emergency, could be organized with suitable supporting ancillaries and headquarters to provide a force for employment for strategical purposes and in air support of the other Services. All units authorized had been formed, and a fighter squadron in excess of the programme continued to operate in Japan as an independent unit. Present strength was mostly composed of personnel serving on peace-time appointment or engagement. The R.A.A.F. reserve, composed of members of the permanent and citizen air forces, was in process of development,

The Government was firm in its policy that aircraft of the most modern and efficient types for the R.A.A.F. should be manufactured in Australia. The types currently in production were the Lincoln bomber, the Mustang, and the Vampire and Nene jet engine. Proposals for the local manufacture of certain new types of jet bomber and fighter aircraft were also now receiving full consideration by the Government, and it was anticipated that a decision on these projects would be taken shortly.

"The R.A.A.F. is being organized as a balanced force of operational squadrons, supported by a training, maintenance and supply organization that will be competent to support such a force in time of war" the Minister added.

# NEW ZEALAND

The following award was included in the New Year Honours List:—

K.C.B.—Air Vice-Marshal A. de T. Nevill, C.B., C.B.E., R.N.Z.A.F.

#### PAKISTAN

The Royal Air Force is to train 500 Pakistani aircraft apprentices for the Royal Pakistan Air Force over the next few years. They will be trained at Halton and Cranwell, and the first entry of 39 is now under instruction.

Under a five-year contract, Air Services Training Ltd., is responsible for the organization of syllabuses and instruction at the new Royal Pakistan Air Force Technical Training College at Karachi. Air Commodore F. E. Vernon, C.B., O.B.E., leaves in February to become Principal of the College.

#### INDIA

As from 26th January, 1950, the Royal Indian Air Force will be known as the Indian Air Force.

His Majesty's Government in the United Kingdom have placed at the disposal of the Government of India the services of Air Vice-Marshal R. Ivelaw-Chapman, C.B., C.B.E., D.F.C., A.F.C., for appointment as Chief of Air Staff and Commander-in-Chief of the Indian Air Force. Air Vice-Marshal Ivelaw-Chapman will take up this appointment with the acting rank of Air Marshal in February, and will succeed Air Marshal Sir Thomas Elmhirst, K.B.E., C.B., A.F.C.

# FOREIGN ITALY

RADAR TESTS.—It is reported that the Italian Government has begun preparations for installing a radar early-warning system around the Italian coast and the northern plains. The programme is hampered by lack of equipment and trained personnel. The only training centre being operated is one near Ostia on the coast West of Rome, but experimental stations have been set up at Ferrara near Bologna and in Sardinia.

#### NETHERLANDS

AIR FORCE POLICE.—It was disclosed in the Budget Speech that the Dutch Government proposes to maintain the present Air Force Units in Indonesia for the time being, whilst sending out relief as required in drafts from home. Efforts will be made to increase the enlistment of Regulars for the Air Force, which now has 9,884 men, of whom 884 are Regulars.

#### THE UNITED STATES

U.S.A.F. Strength.—When presenting his budget at the beginning of last year, President Truman called for a reduction in the Air Force to 48 Groups. An Air Force of 70 Groups, which would involve the procurement of several thousand new aircraft, has long been advocated, and now Senate approval has been given for funds for a 58 Group United States Air Force. The new budget has not yet been approved in the White House.

AIRCRAFT FACTORIES.—Mr. W. Stuart Symington, Secretary of the U.S.A.F., has stated that the long range of bombers, coupled with the advent of the atom bomb, now justifies a wider dispersal of aircraft factories in the United States. With one or two exceptions, these factories are grouped on the East and West coasts, and it is his intention that they shall be spread over a wide area of the central part of America, where they can obtain greater protection. The contract for the B.47 all-jet bomber has been placed with Boeings on condition that it is built at their Wichita factory, and not at Seattle. In addition, the Navy have approached the Grumman factory and suggested their moving from Long Island to the Goodyear Plant at Phoenix, Arizona, and both Lockheed and Chase Aircraft Corporations have been asked to move into the Government-owned plant at Tulsa

NAVAL AND AIR FORCE PILOTS.—Eight naval pilots have been attached to Continental Air Command and eleven air force pilots have been attached to naval units for one year's duty, in order to further unification between the Services. In addition, there is a scheme afoot to allow volunteers to make permanent changes of Service between the Air Force and the Navy.

RECRUITING EXERCISE.—On 22nd October, for the first time, units of the R.C.A.F.R. and the U.S.A. National Guard operated together in an exercise, which had a strong recruiting bias, over New York City.

New Aircraft.—The B.47A (Strato-Jet) has just completed its first test flights. It is expected to be faster than the previous model and to carry a greater bomb-load.

It is reported that the XF-90 long-range penetration fighter has exceeded the speed of sound in level flight. The actual speed reached, however, has not yet been divulged.

The Globemaster II, the largest transport at present in production for the U.S.A.F.. has completed construction and has started flying. The aircraft is capable of carrying tanks and bull-dozers, and as a troop transport it will carry 200 fully equipped troops. plus additional field equipment.

The latest version of the B.50 series (Superfortress), the B.50D, has been fitted with two underslung wing tanks of 700 gallon capacity each, thus increasing the range of the aircraft to more than 6,000 miles.

# REVIEWS OF BOOKS

#### GENERAL

War in Three Dimensions. By Air Vice-Marshal E. J. Kingston-McCloughry, C.B.E., D.S.O., D.F.C., R.A.F. (Jonathan Cape.) 10s. 6d.

In this study of warfare for the new era, consequent upon the conquest of the third dimension by aircraft and the rocket-projectile, the author of *Winged Warfare* analyzes the nature of hostilities in the third dimension, and the new meanings which it has given to the old concepts and principles of strategy.

Having dealt with the gradual development of these changes since the commencement of the First World War, he leads on to the future and finally to the effect his principles are likely to have on the problems of Imperial defence in the years to come.

This slender book will be of value to military students, but it requires careful and serious reading if the contents are to be correctly assimilated. This would be facilitated if a pull-out page were included containing a brief aide-mémoire defining the basic phrases used by the author to portray the various actions and counter-actions in a war of three dimensions which, though repeatedly quoted, often necessitate a turn-back to rekindle the exact meaning in the reader's mind.

Rommel. By Desmond Young. (Collins.) 12s. 6d.

The author of this biography of Rommel has chosen to concentrate the limelight on aspects which were not generally known, rather than to examine in detail his record in the desert, where he made his name. The result, therefore, is a piece of journalistic enterprise rather than a work of military history or biography.

Many legends are exploded such as that he was a policeman, an early supporter of the Nazi party, a member of the Frei Korps, a sycophant of Hitler's, and others: he was none of these. He was a typical regular regimental officer from the age of 20 onwards, and never interested in anything else. Born in 1891, son and grandson of a schoolmaster on his father's side, and grandson of a President of Wurtemburg on his mother's side, he came of a typical professional middle-class Swabian family. He joined his local infantry regiment, the 124th, at the age of 19 and was commissioned in 1912, after training at the Kriegschule at Danzig, where he met his future wife. In 1914 and 1915 he was a platoon commander in France, where his courage and initiative won him Iron Crosses of the First and Second Class and where he was twice wounded. He was lucky then to be transferred to the Wurtemburg Mountain Battalion, with which he served with great distinction in Rumania and Italy, winning the Pour la Merite—the German equivalent of the V.C., for a remarkable feat of endurance and leadership at Monte Matajur on the Isonzo front in 1917. Promoted Captain, he was posted to the only staff appointment he ever held, in January, 1918. After the end of the War he returned to his regiment. After two years in command of an Internal Security Company, whence arose perhaps the policeman legend, he returned to his regiment again in 1921, and commanded a company for nearly nine years—years which he spent in a thorough study of war, relieved by ski-ing and riding expeditions. From 1929 to 1933 he was an Instructor at the Infantry School at Dresden, where he wrote his well-known book, Infantry Attacks. In 1933, at the age of 41, he was promoted Major and given command of a ski battalion. Two years later he was promoted Lieut.-Colonel and sent as an Instructor to the War Academy at Potsdam. After a short assignment to the Hitler Jugend to improve their discipline, which soon came to an end when he crossed swords with Baldur von Schirach, he was sent to command the War School at Wiener Neustadt in Austria.

In 1939, came a fateful appointment—command of Hitler's bodyguard, in which capacity he saw the Polish Campaign. Hitler was impressed, and as a result Rommel was given command of 7th Panzer Division two months before the attack on France, his first experience of tanks. In that campaign he showed his brilliant ability to exploit

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with of the the possibilities of armoured and mobile formations to the full. In February, 1941, he was sent to Libya to command the German troops there, which at first consisted only of 5th Light Panzer Division, later re-named 21st Panzer Division.

From then on the story is one of Rommel's continuous fight on three fronts—against the British, against the Italian High Command, who failed to keep him properly supplied, and against the German Supreme Command, who never gave him the few extra divisions or equipment which would have enabled him to reap the reward of his brilliant strokes against us in the desert. It is a pity that the author deals so sketchily and even inaccurately with the period which, after all, made Rommel famous. Admittedly it is not easy to sort out the truth about events in the desert in 1941 and 1942, and Rommel's own papers were only discovered after the main part of the book had been written; but one cannot help feeling that greater trouble should have been taken to give an accurate account of these operations, and that the book should have included some description or discussion of the tactical methods and organization employed by Rommel.

From before Alamein to the end of the campaign in North Africa he was a sick man, who knew he was fighting a losing battle. Rommel was never the blind optimist many have made him out to be. He was much too realistic and clear-headed to have any illusions; but he found it difficult, in fact impossible, to convince his superiors of the simple military fact that the strongest side wins. His conduct of the long retreat to Tunisia was masterly, and he makes some pithy comments on the caution with which he was pursued. Thereafter, the main interest in the book lies in Rommel's disillusionment with Hitler, and his part in the conspiracy to overthrow him. The straightforward manner in which he dealt with all, from Hitler downwards, must be admired and respected. The story of his final murder is real tragedy. The capacity of the Germans for self-control, as well as their capacity for playing a completely false game, has never been better demonstrated than at Rommel's state funeral where the chief mourners—Field-Marshal von Runstedt, who delivered the funeral oration, and several others, all knew that it was horribly and shamefully false.

The most interesting parts of the book are the few extracts from Rommel's own papers, only discovered after the book had been written. His adverse comments on the ponderous functioning of command on our side were pertinent then, and probably even more so to-day. The speed at which events occurred in the desert forced commanders and staffs to cut down the cackle and act quickly—but still not as quickly as Rommel in most cases. The effect of subsequent campaigns in Italy and North-West Europe, where we had a massive superiority, were never in serious danger of a deep counter-attack and where "set-piece" attacks were the order of the day, has been to lay a stodgy and ponderous hand on the functioning of command in the British Army. One cannot but feel that at the beginning of another war we may find ourselves caught napping, if we do not heed the warnings given us by Rommel and forsake our leisurely methods, our eternal conferences and interminable "O groups," and learn to wage modern war with modern methods. This entails personal command exercised by wireless from moving or at least mobile command vehicles, not by runner, line and conference from the cellar of a house.

This work shows signs of too hasty composition, including a most misleading 1942 for 1941 on page 88. Its style is journalese, and the story is interlarded with far too many of the personal reminiscences and opinions of the author. One must hope that some serious military historian will be impelled as a result to delve into the material which it has revealed, and produce a proper military biography which may be of use and interest to a student of war. That this would be worth doing there is no doubt, for Rommel was a commander of the highest class.

Secret Forces. By F. O. Miksche. (Faber and Faber.) 15s.

This book, closely following the publication of Fitzroy MacLean's Eastern Approaches, comes at an opportune time. For while Eastern Approaches was a vivid and fascinating

narrative of the author's adventures and impressions, culminating in his Military Mission to Tito's partisans, Lieut.-Colonel Miksche sets out the strategy and technique of "the People's War."

It is in reality a textbook of underground warfare. The author analyzes four different ways of carrying on the struggle against an invader, and shows how intelligence, propaganda, sabotage and guerillas complement each other. He is well qualified to do so, since during the late war he held the post of Director of Operations in General de Gaulle's secret service organization.

The book begins by outlining the communist concept of modern war, ". . . . which attaches almost as much importance to 'the People's War' as the Anglo-Saxon theorists do to material and technical superiority. [The former] is certainly an extremely dangerous weapon, and its full potentiality is as little known as that of the atom bomb to which it even bears a certain resemblance." This conception is, I think, beginning to be understood by some people in the West, but the ways of combating it are not so well known. The author therefore outlines the methods of defence against partisans. Conspiracy, he says, is best met by counter-conspiracy, and he quotes Napoleon's famous dictum, "Send out spies everywhere, and keep yourself acquainted with the movements of enemy partisans." This was basically the German method employed in France, which he elaborates with many examples.

Miksche does not deal with Europe alone, but brings out the importance of Lawrence's work with the Arabs, which was not at the time, he says, fully appreciated by the Higher Command. This is not altogether true, for Allenby certainly understood Lawrence's value. He stresses the lesson, repeated by Fitzroy MacLean, that the main value of guerillas is their mobility and harassing tactics, and that they will fail if they allow themselves to become involved in pitched battles. Lawrence understood this and ceased operations, dispersing his forces, when the enemy had reacted to his thrusts.

Turning to economic warfare, he criticizes the priority which was allotted to air targets in Germany, and argues that the sources of raw material should be attacked systematically before the auxiliary industries and assembly plants. He feels that too little priority was given to oil, food and coal production and electric power plants, and too much to, say, ball-bearing factories and assembly plants, thus needlessly prolonging the War. This appears logical, and no doubt a Ministry of Economic Warfare would agree.

The author at times appears to be carried away by his own enthusiasm. For instance, he elaborates, in one passage, the delays which were caused by partisans to the concentration of German formations in Normandy in 1944. The part the partisans played was indeed important, but the R.A.F. isolated the battlefield and made all movement by day within a hundred miles or more of the battlefield virtually impossible. He does, however, bring out the important lesson that while partisans must work in closely with the Allied Command in conformity with the Allied strategic plan, there is difficulty in taking the partisan leaders entirely into the Allied Commander's confidence, owing to the dangers of leakage and treachery.

In places the book may irritate some professional soldiers. They are considered useless for partisan warfare, by virtue of their rigid peace-time training, whereas the amateur soldier is considered more suitable, having no former professional training to forget. "You will have to forget a great deal," he quotes General Bugeaud saying to his officers fighting the guerillas in Algeria. Maybe British regulars are more adaptable than some of their continental friends.

This book is interesting, and should appeal to regulars and the well-educated members of the general public. It merits study by all who are engaged in planning victory in the cold war, and active defence schemes in the event of war. Perhaps we are still too rigid in our conception of a future war. What if it is not atomic because both sides mutually abstain from using the "decisive weapon"? In such an event our numerical inferiority will go hard against us unless we prepare now some compensation for it. "He did more

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single-handed than a whole division of the British Army would have done," wrote Mount-batten of Lieut.-Colonel Chapman, author of *The Jungle is Neutral*. The author has shown how a few resolute men could do it again on an even greater scale, if ably led, and if preparations are made in advance.

Cordon and Search: With 6th Airborne Division in Palestine. By Major R. D. Wilson, M.B.E., M.C. (Gale and Polden Ltd., Aldershot.) 15s.

"Duties in aid of the Civil Power" have never been among the pleasantest of a soldier's jobs. Unfortunately, in spite of the decentralization and shrinkage of our imperial commitments, there seems but little prospect in the unsettled World of to-day, that the British Army will be any less likely to be called upon in the future to undertake these duties. "Cordon and Search" can almost be described as an up-to-date text book for this difficult and unpleasant work.

It is a history of the operations of 6th Airborne Division in Palestine during the troubled period 1945–1948. The reader who expects to learn anything new concerning airborne technique will be disappointed, for this division was used, as any other division might have been used, as plain overworked infantrymen. Even the divisional artillery and other arms were turned on to the task—and right well and efficiently they performed it. Indeed this may claim to be one of the principal lessons of this book—the lesson that against an enemy who relies upon up-to-date "cold war" methods of guerilla fighting, sabotage and terrorism, none of the modern mechanical arms can replace good infantry and plenty of it.

After attacks on three air stations in February, 1946, all aircraft withdrew for some time to Egypt. Apart from help in spotting illegal immigrant ships, there is scarcely a mention throughout the book of the Air Force being able to assist in this policing. In this connection it is worth noting that it is such "cold war" with which we have to cope now and, perhaps, for some time to come.

This book contains minor details of unit movements and changes, which will be of interest to members of the division and to military historians. Of particular value to the latter will be the complete and carefully compiled appendices (of which there are seventeen) giving such information as the changes in Order of Battle and many other valuable records. But the inclusion of all this information has in no way rendered the book indigestible for the general reader; on the contrary, the plain tale of this exciting and most extraordinary campaign flows on easily, and the successive stages and incidents are presented in such readable form that the lessons—which are many—can easily be extracted.

There are numerous illustrations and an adequate supply of maps. Great care has obviously been taken by Major Wilson himself, his publishers, and many others who assisted him to produce a work which would be worthy of the Division. In this effort they have certainly succeeded. The only criticism needed is that an index might have been well worth the extra time and labour needed.

#### NAVAL

Nelson the Sailor. By Captain Russell Grenfell, R.N. (Faber and Faber, London.) 8s. 6d.

There has been such a spate of books about Nelson recently that it might be questioned whether there is room for another. But this rather specialized biography will certainly find its own niche, for it concentrates on describing the naval officer and his trials and triumphs almost to the exclusion of the romantic sentimentalism which too often tends to obscure them.

It is true that, as we are shown, family and political influence gave him a big start in his career; but if ever a man was a shining example of Jacky Fisher's dictum a hundred years later that "favouritism is the essence of efficiency," that man was Nelson, for his

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chief patron—his uncle, Maurice Suckling, Comptroller of the Navy, died when Nelson was still a young Lieutenant; yet such was the reputation he made for himself and the influential friends it won for him that he was a post-Captain at 20 and a Rear-Admiral before he was 39. A curious thing about his rapid advancement was that it sometimes came about despite his services being officially ignored by his immediate seniors; for example, Sir John Jervis, in his dispatch after the Battle of St. Vincent, made no mention of Nelson and the gallant exploit which brought about that victory, although he had been generous enough in his personal commendation.

There can be little doubt that Nelson's successes brought him as many enemies in high places as did his insubordination when he could not suffer old fools gladly; but, if his star seemed at times to be in danger of extinction, he seized the next golden opportunity to set it shining more brightly than ever.

It is in this spirit that Captain Grenfell has produced his book, and the result is a life of Nelson, written in sailorly language and depicting him as naval officers like to know him—neither saint, sinner, nor glamorous hero, but the acme of their own professional ideals and ambitions. The author concentrates on the essentials. He has taken the trouble to get his facts right, notably in the case of Trafalgar where he has reproduced the plan of the Battle from which the model in the R.U.S. Museum was rearranged and for which we are all indebted to Rear-Admiral A. H. Taylor. He brings out, too, in his account of that action, how it was British gunnery, quite as much as Nelson's tactics, which secured the crushing defeat of the enemy. Nelson understood, what many of his successors in more modern times failed to grasp, that the aim of all manœuvres in ship against ship action should be to enable them to use their guns to the greatest advantage; all else is just useless posturing; hence Nelson's order that, if in doubt, no Captain could do wrong if he laid his ship alongside one of the enemy—then it would be a duel where every shot counted and in which the ship with the best served guns would win.

Of all the books about Nelson, this probably merits most the modest space it needs in the Service library or on the cabin shelf; nor could it be bettered as an introduction for the younger generation of to-day to naval history of the times and its greatest figure

Sound of the Guns (The Wars and Service of Admiral Sir Walter Cowan, K.C.B., D.S.O., M.V.O., A.M.). By Captain Lionel Dawson, R.N. (Pen-in-Hand, Oxford.) 128. 6d.

This well-written biography of a great and gallant "character" of a Navy, the like of which we shall not see again, recalls the days before wireless began to hamstring individual initiative and independence, with the resulting tendency to mould officers into a "sealed pattern." No one could ever accuse Walter Cowan—whether the Midshipman or the Admiral, of "conforming to type." He has always launched out on his own courses, deliberately seeking active service and adventure; and when they were not to be found with his Service, he managed to join up with the Sister Service—indeed, few men can be more correctly described as "soldier and sailor too."

With Cowan as the central figure, the author recounts much naval and military history from 1884 to 1901, starting with life in the sailing era, when its protagonists were still fiercely resisting the intruding steam engine, and with operations up the Niger River and other West African Expeditions, including Benin, between 1894 and 1896. This active service whetted the young officer's appetite for more "soldiering" and he could not rest content—even in the early command of a destroyer—until he had joined Beatty and Keppel, who were already earning their first laurels up the Nile. There he met Kitchener, to whom he became closely attached through the Omdurman and subsequent cleaning-up operations. This led to his slipping through the Second Sea Lord's net—which must have had a wide mesh in those days—and finding his way out to the South African War in 1900, in time to take part in the fiasco of Paardberg and the victorious march to Bloemfontein. He went home in the same ship as Lord Roberts and rejoined the Navy.

It is evident that there were two schools of thought about the qualifications of these amphibious warriors, for early promotion; but Cowan was one of the lucky ones, and became a Commander at 30, leading to post-Captain at 35.

The outbreak of the 1914–18 War found him in command of the already obsolete battleship "New Zealand," but, thanks no doubt to the good offices of his old friend Beatty, it was not long before he was given the far more congenial appointment of Flag Captain of the battle cruiser "Princess Royal," wearing the flag of the newly promoted Rear-Admiral O. de B. Brock. It was in that ship he took part in the battle of Jutland and witnessed the sinking of the "Queen Mary," "Indefatigable," "Invincible" and "Defence."

His biographer has, perhaps unwisely, quoted the impressions of the battle as seen from one of Beatty's gallant pack who, at the time, were convinced that they had engaged the German battle fleet almost single handed and delivered them to the Grand Fleet's battleships to administer the coup de grace, only to see the enemy slip out of the clutches of those mastodons because they were over-shy of torpedoes.

Mr. Churchill has written that Jellicoe was the one man who could have lost the War in an afternoon. Had the supreme command rested on the irresponsible shoulders of one of the "let's get at 'em; never mind the cost " school, we probably should have lost the War that day. No one modified his views on the subject of the correct employment of the battle fleet more drastically than Beatty after he became C.-in-C. of the Grand Fleet.

The end of the war with Germany left a very unsettled state of affairs in the Baltic and, as Rear-Admiral of a light cruiser squadron, Cowan had a task after his own heart in being given a fairly free hand to deal with innumerable politico-military problems and vicissitudes.

Post-war years had their rewards for him in the shape of command of the Battle Cruiser Squadron and finally C.-in-C. North America and West Indies—" about the most pleasant command of any, with the War behind me." He retired as a full Admiral in 1928 at the age of 59, and spent the years before the next war in his favourite pursuits, particularly in hunting: all his life the horse has been his inseparable companion.

Perhaps because they deal with recent history, the last three chapters of this book are the most arresting. They show this irrepressible, though no longer young, warrior back in his eagerly sought setting—on active service; and, because no place could be found for him in the main Fleet, first commanding small craft engaged in commando enterprises, and finally, once more, with the Army, fighting in North Africa and Italy. Even a spell as a prisoner of war did not daunt him, and he ended his active career in "sound of the guns" with some adventures by sea and land in the Adriatic.

This is a most readable and inspiring book on which the author can be congratulated for writing it and Admiral Cowan for providing the inspiration.

Jane's Fighting Ships. Edited by the late Francis E. McMurtrie, A.I.N.A., and and Raymond V. B. Blackman, A.M.I.N.A., A.I.Mar.E. (Sampson Low, Marston and Co.) £3 3s.

Just a year ago, the JOURNAL paid tribute to Mr. McMurtrie on his production of the Jubilee number of Jane's Fighting Ships—the culmination of twenty years of his editorship. Only a few months later the very large circle of his admirers had to lament his death—a real loss to the navies of all civilized Powers.

The new editor will, it is feared, have more to do in the way of scrapping than building up, and already the 1949-50 Jane marks the departure of a number of grand old veterans, whose names and descriptions had their places for many years in the pages of its predecessors. Particularly noticeable is the clean sweep of all pre-War British battleships and a number of older cruisers. It is a slight consolation to know that the five surviving capital ships are as good as any afloat.

The progress of new construction for our Navy makes depressing reading, but the delay is not entirely attributable to economic adversity; so many novelties are going through the "trial and error" phase, that decisions on new designs, armaments, and equipment must be particularly difficult to make at present.

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A useful Foreword by the Publishers forecasts warships of a new type, "among them the atomic bomber carrier, the guided missile control vessel, the task force command ship, the anti-submarine cruiser, rocket destroyers, fast low-lying frigates, and gas-turbine ships." Descriptions of some of these are to be found in the ensuing pages. The American Navy was all set to build the record largest carrier, capable of working twenty-four 50-ton bombers; but this has been cancelled after a "jealous controversy" with the newly-formed United States Air Force; nevertheless, it still has the largest carriers afloat in the three 45,000 ton "Midway" Class. The British "Ark Royal" and "Eagle" of 36,800 tons will, however, be not far behind—except as regards completion: the former is due to be launched by H.M. the Queen on 3rd May next; the latter may be completed by the end of this year.

Work on the three British "Defence" class cruisers is at a standstill pending a decision on their future armament and equipment—now the subject of research we are told. The U.S. Navy also has called a halt to cruiser construction for the present, with the completion of the three heavy (17,000 tons) "Des Moines" and the light (14,700 tons) "Worcester" classes.

An interesting conversion mentioned in the British section of this year's Jane is that of the old County (10,000 tons) class cruiser "Cumberland" to act as a "trials" ship. She is to be ready in 1951 for testing "anti-aircraft guns, torpedoes and guided missiles." Fin stabilisers are being fitted to reduce rolling.

The U.S.N. cruiser "Northampton," of the "Oregon City" class, laid down in 1944, has been redesigned as a Task Force Command ship (to be known as CLC-1). A new American type is the "Norfolk" class—anti-submarine cruiser. All that is published about it is that two ships are provided for and they will probably displace about 5,500 to 7,000 tons and will cost \$40,000,000 each.

Four more of the British "Daring" class destroyers are due for completion in 1951. It is true that the armament has been increased to six 4.5 guns, as compared with the four 4 in. of the previous "Weapon" class, but there is a suspicion that the displacement has swollen to 2,610 tons from 1,980 tons to provide more comfortable accommodation for the lower deck quite as much as to improve fighting efficiency. There will have to be a limit to this trend to sacrifice the latter to the former or we shall be building luxury liners instead of warships.

Foreign navies, other than the American, call for no special comment at the moment, except that it is always interesting to try to pry behind the Iron Curtain. Jane publishes "from a hitherto reliable source" some details of the new Russian battleships. There seems to be some doubt whether any or all of these ships are completed—one was laid down at Leningrad in 1939 and is thought to be still on the stocks; two reported to have been laid down at Archangel in 1942 are "believed to be in commission." This source gives the main armament of these ships as nine 16 in. guns in three triple turrets; but a Swedish report says that the Leningrad ship, or ships, will have six 16 in. guns and two "catapult towers for firing radio-controlled aerial torpedoes," also there will be "rocket-firing apparatus." Jane warns that "these reports are presented with all due reserve."

The Russians—typically—have ignored the Tripartite Naval Agreement, under which the half completed German carrier "Graf Zeppelin" was due for destruction, and completed the ship, which, it is reported, is to go to the Far East.

The armoured ship "ex-Lützow" was also due for destruction, but has been refitted as a sea-going gunnery training ship in the Baltic Fleet.

<sup>&</sup>lt;sup>1</sup> But see also the review of Les Flottes de Combat, 1950, below.

Jane credits Russia with seven fairly modern cruisers of 8,500 tons or so, two ex-German of 15,000 tons and 1939 vintage, and the ex-Italian "Duca d'Aosta," completed in 1935. Six destroyers of over 2,000 tons are building.

Interest will be greatest in Russia's submarine strength. Of this, the Annual has to say, "About 360 submarines of various types are believed to exist, including ex-German tonnage." Under the current five-year naval construction plan it is aimed to have 1,000 submarines completed for service by 1950-51, of which 400 are for the Far East, 300 in the Baltic, and the remainder in the White and Black Seas. But, it is added, "it is extremely doubtful whether the Russians have the shipyard capacity and trained technicians necessary to build an under-water fleet of this size in such a short time." The chief factor in this very real menace is the extent to which they will have German assistance in building, training and even manning this commerce-destroying force.

The general production and lay-out of the latest *Jane* is what we have come to expect, and we wish the new editor well in his task of maintaining the very high standard bequeathed to him.

Les Flottes de Combat, 1950. Edited by Ms. Henri et J. Le Masson. (Société d'Editions Géographiques, Paris; on sale in London at George Philip and Son, 32 Fleet Street.) £5 5s. approx.

This is an even older publication than Jane's Fighting Ships—of which it is the French equivalent, as it was founded in 1897. From modest beginnings it has grown into a sizeable volume, well illustrated and up to date. It has two useful features not to be found in its British counterpart—a summary at the beginning of each Country of the number of ships of each class and, where appropriate, details of the most important types of naval aircraft.

Photographs of a model and an outline sketch of a new aircraft carrier are referred to as representing the first large warship projected for the French Navy since the War. To be named the "Clemenceau," this ship is designed to displace 15,700 tons, and to provide indispensable air cover for the battleships and to be the pivot of an anti-submarine group.

The only other sizeable warship under construction for France is the anti-aircraft cruiser "De Grasse" of 8,000 tons, with a main armament of nine 6-in. A.A. guns. Work on this vessel is at present suspended.

It is interesting to see what is to be learnt from this French source about the Russian Navy. It states, with some appearance of conviction, that one of the new battleships was launched at Leningrad in July, 1945. Another is reported as having been laid down at Nikolaiev in 1938, but badly damaged during the War and not proceeded with. Mention is also made of a third ship building at Archangel. Where Jane gives a possible three, Les Flottes gives a probable two.

A note says that the Russians officially announced the destruction of the ex-German carrier "Graf Zeppelin" in November, 1938. This does not agree with the information in Jane.

Further details than those to be found in the British Annual are given of the cruisers of the "Kirov" class; but neither publications would claim to be definite in their information.

Reference is made here, too, to new Russian submarines of a faster type and greater radius of action, and of German design.

This publication is an interesting and valuable addition to our sources of information about foreign navies.

The Maritime History of Russia, 1848-1948. By Mairin Mitchell. (Sidgwick and Jackson, Ltd., London.) 31s. 6d.

A really sound history of Russia at sea has been badly needed for many years, for the numerous books which have been about, or have touched on, the subject during the last half century have all been written with a bias in one direction or the other. It is natural, therefore, that there should be a tendency to regard any new book on the subject with a certain amount of suspicion. In the present case, however, this is not justifiable, for the author, who obviously has a keen interest in Russia particularly of the old days, has taken great care to use her evidence with an absolute lack of prejudice. This is shown, among other ways, by the innumerable references to her sources of information.

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The poor performance of the Russian Navy in the Crimean War, the Turkish War of 1878, and the Japanese War, to say nothing of the two wars with Germany—although in these latter there were one or two conspicuous exceptions—will be contrasted with the high-pressure propaganda of the Soviet Government and its friends at the present day. The author is careful to remember and point out the vastness of Russia and the variety of peoples who come under her control. If Rurik and his fellow Norsemen, who did so much for the Country in the IXth Century, were not true Russians, neither are the numerous subject peoples, from the South Coast of the Baltic to the East Coast of the Adriatic, who are helping to man the Red Fleet of to-day. Their service is what counts, and there is no doubt that Moscow is making use of them, although it is doubtful whether they will reap as much personal benefit as Rurik and his followers did.

The sixteen chapters of the book proper are full of useful information, carefully documented and authenticated. Perhaps the sixteenth chapter on inland waterways might not be properly regarded as maritime history, but it is of importance to students of Russia at the present time. The division of the contents into water-tight compartments, mostly geographical, instead of into any sort of chronological order, makes it a little difficult to get a complete picture in many cases, and the quest by most readers for information about what is happening in the Russian Navy to-day, will not be satisfied. Chapter XIV, for instance, consists of thirteen pages on the Imperial Russian Navy and seventeen on the Soviet Navy, but there is a good deal of important naval matter in Chapter IV, devoted to the Black Sea and its Fleet. The latter part of Chapter XIV frankly admits that the Russian policy of extreme secrecy, going back to the XVIIIth Century at least, prevents any authentic information being given, and refuses to accept as fact the extravagant claims circulated by the Russian Propaganda Department. Even the American estimates of the Soviet naval forces, which were accepted during the War as being the most reliable, are treated with reserve.

The supplementary section dealing with the Fleet in the 1939-45 War runs into sixty-odd pages and is naturally more dependent on Russian sources than the more historical side; but it is obvious that the author has very little faith in the communiqués of the Moscow Government. This section is unfortunately confused by the inclusion of many things which have little or no connection with that War, and it would appear that more use might have been made of the experiences of the British and American seamenaval and mercantile, who maintained the supply service to the North with so little help or co-operation from the Soviet Navy. A very large part of this section is second-hand unofficial information—honestly acknowledged as such, but of rather doubtful value.

The book makes no pretence to give any strikingly new information about the present condition of the Soviet Navy and Merchant Services. Indeed, had an attempt been made to do so, the value of the information would certainly have been problematical. On the other hand it does provide a precis of what the Soviet leaders have said concerning their interest in sea power of all kinds, and that is a matter which deserves more attention than it is usually given.

The main criticism of this book must be that it is overfull of matter, culled with great industry from innumerable sources, but served up without the requisite pruning and arranging which would save the reader from mental indigestion, while the author lacks the expert knowledge to interpret the events it describes. It is an indication of the lack of balance of the contents that the naval operations of the Russo-Japanese war occupy no more than three pages.

The maps, old and new are interesting, but the latter omit many names in the text. The bibliography is extensive, although it is to be feared that not all the works mentioned

are accessible or readable for the average student. In the care which has been bestowed on it, and its completeness, the index is good, but has the disadvantage that it is divided into two parts—main and supplementary, which somewhat reduces its utility for the average man who is apt to forget that the subject which he wants is over the dividing line of time.

#### ARMY

History of the Great War: Military Operations, Italy, 1915-1919. Compiled by Brigadier-General Sir J. Edmonds, C.B., C.M.G., and Major-General H. R. Davies, C.B. (H.M.S.O.) 308.

This volume gives an outline of the campaign in general, and a more detailed description of the operations of the British Expeditionary Force after its arrival in 1917. The reader must judge for himself whether this detachment from the main theatre was justified.

The shape of the Austro-Italian frontier, and its difficult terrain, had a marked effect on the strategy and tactics of the campaign and, as the authors point out, "Italy's topographical position was weak." The Venetian provinces formed a huge bulge, enclosed on the North and East by Austrian territory and, at the outset, the Austrians held the crests everywhere. On the other hand, the Italians were on interior lines, and had better communications.

Owing to political pressure, material and stores expended in the Libyan War had not been replaced. The Italians used the period of neutrality to remedy defects as far as possible, but there remained a shortage of heavy guns and essential raw materials. Nevertheless, Commando Supremo decided to take the offensive on the Isonzo towards Trieste, and pressure was maintained there until the disaster of Caporetto in October, 1917, with an interval in May, 1916, when the Austrians launched an abortive offensive from the Trentino. Little was achieved by either side in two years, though both suffered heavy casualties.

Early in 1917, both the C.I.G.S. and Marshal Foch agreed that a situation might arise when the Italians would require help in infantry as well as the medium artillery already en route. After various conferences, tentative plans were worked out for the movement of reinforcements by rail from France, and for their concentration and maintenance. Details are given in an appendix. A welcome feature in this volume is that considerable attention is paid throughout to the problems of movement and maintenance, and a chapter is devoted to "A/Q."

In September, the German High Command agreed to send reinforcements to the Austrians, and the Fourteenth Army of seven German and five selected Austrian divisions was formed. On 24th October, this Army, acting as the spearhead, struck the Italian Second Army holding the northern sector of the Isonzo front. A fifteen-mile-wide gap was made on the first day, and in a week the Italians were back behind the Tagliamento. After a pause the Fourteenth attacked again on the northern flank and the Italians began to withdraw to the Piave, the Second Army being reported as "a mass of morally unnerved humanity." The debacle of Caporetto was not entirely due to treachery or unwillingness to fight. Ineffective command, faulty dispositions and lack of training are shown to have been contributory causes.

On 9th November there was a change in command, and by the next day the Italians, less the Second Army, were holding the Piave. A few days later the offensive died down: the Austro-Germans were exhausted and had outrun their communications. French troops began to arrive on 31st October, and by 23rd November six divisions had detrained. Two British divisions completed detrainment on 16th November, two more by the 25th, and another in December. There was considerable anxiety as to the ability of the Italians to hold the Piave, and Lord Cavan rightly opposed a forward concentration area for the leading divisions. It was not until the end of November that our XIV Corps began taking over the important Montello sector on the Piave. About the same time a French corps

took over on our left. We at once started improving the defences, and taking minor offensive action of which the Austrians disapproved as they considered the Winter a time for repose.

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After a quiet Winter British and French divisions began to leave early in March, 1918, and General Plumer returned to France. By mid-April only the XIV Corps (7th, 23rd and 48th Divisions) under Lord Cavan, and a French corps remained. This withdrawal is fully discussed in Chapter XI.

In March, the XIV Corps took over a sector in the North, opposite Asiago, where an offensive was proposed. But the Austrians struck first, making simultaneous attacks here and on the Piave front. After meeting with some success on the Piave—they took Montello—the Austrians were unable to sustain the offensive and withdrew over the river. There was no German spearhead this time, and the strategic plan was faulty. These events are well described in the narrative; and the fighting on the XIV Corps front, given in detail, shows the difficulties of defence in hilly, wooded country, and that such a sector requires a higher proportion of eyes and ears on the ground.

In spite of Allied efforts it was not until September that Commando Supremo, presumably heartened by events in France and the absence of Germans on the front, agreed to take the offensive. The fundamental idea of the plan was to break through on the Piave, separate the Austrians there from those in the Trentino, and then roll up the latter. The troops on both sides were about equal in numbers.

Leaving the 48th Division on the Asiago, the XIV Corps moved to the Piave, and by 25th October had taken Papadopoli—a large island where the river is  $2\frac{1}{2}$  miles wide, preparatory to the main operation. On 27th October, the French on our left crossed; the Italians failed, but XIV Corps was successful, and established a good bridgehead by the evening. The Austrian account mourns the fact that: "The appearance of the British created universal terror."

Overcoming bridging difficulties, the XIV Corps increased its gains during the next two days, the Italians managed to cross, and the Austrians, also harassed by the R.A.F., began to disintegrate. The Tagliamento was reached on 3rd November, and the Armistice took effect at 3 p.m. next day. Meanwhile, the 48th Division had made an amazing advance into the Trentino. After the terrain, their chief difficulty seems to have been the number of prisoners which accumulated. All the British operations, grouped under the title "Battle of Vittorio Veneto," and described in considerable detail in Chapters XIX to XXIV, are worthy of study.

This, the last volume, contains much of interest to the military student. The maps, however, are not quite up to the usual standard, and the sketches are awkwardly placed for reference; the reasons for this are given in the preface. The appendices are useful, but no detail of the composition and organization of the Italian divisions is provided. There is an error on page 260 where it is stated that certain units were selected to "remain" in Italy, though these were the nine battalions sent to France in September, 1918. (See Appendix II.)

These operations in Italy show what may be achieved by even a few first-class troops under resolute leadership against mass armies of "cannon fodder." The seven German divisions at Caporetto, and the five French and British divisions in the final battle had an effect out of all proportion to their numbers. Without these French and British troops there would have been no Vittorio Veneto.

The Noble Duke of York. By Lieut,-Colonel A. H. Burne, D.S.O. (Staples Press.) 25s.

The author has set himself the difficult task of restoring the reputation, as a commander in the field, of one who has till now suffered from a "bad Press." Frederick—second son of King George III, commanded the British Expeditionary Force in the Low Countries during the opening campaign of the long war against France. He also spent

many years of that war at the Horse Guards as Commander-in-Chief. In the latter appointment his abilities as an administrator and military reformer have been generally recognized. His popularity throughout the Army, with other ranks perhaps more than among the officers, seems to have been beyond dispute. But his generalship in the field failed to secure for him a place in history among the Great Captains. Indeed, his only claim to notoriety or fame in this branch of military art has been the undignified performance ascribed to him in a stupid nursery rhyme. There are few things that damn a reputation more than ridicule. The Duke's biographer has thus had formidable difficulties to face. He has tackled them ably.

Basing his argument largely upon certain manuscripts in the Royal Archives, which till now have not been given adequate consideration, the author seeks to show that the Duke had within him the makings of a great commander. His failures or partial successes in the field were due to those external factors against which every British commander has had to contend at the beginning of every great war—namely lack of resources due to peace-time cheese-paring, interference by politicians in the direction of operations, backbiting by disgruntled whisperers at home, and, last but not least, the waywardness and unreliability of allies.

The author has made a convincing case. The Duke was a keen and serious student of war. His letters to the King and his actions in face of emergency show evidence of leadership, force of character, and quickness of decision. These qualities deserved better results than were actually achieved. Under happier circumstances, at a later stage of the war, when England had overcome her initial unreadiness and had learned the lessons of her early misfortunes, the Duke might well have won fame as a great commander.

It is this point which makes the book of practical interest to-day. Otherwise this gallant defence of a long dead soldier might have been a matter of academic interest only. In this biography can be found a prototype of many a British commander since that day: men by no means fools nor ignorant of their profession, but merely less fortunate than others who took their places later. Not everyone whose fate has been oblivion or obloquy has necessarily been a "dud." The value of an extract from history, such as this, lies largely in assisting the reader to understand history as a whole.

Though primarily a study of military history, the book has a lively human interest running all through it, particularly in the chapter which deals with Mrs. Clarke and the accusations of corruption. The Duke emerges from this biography as a decent but perhaps rather indiscreet gentleman, neither the fool nor the rogue that some of his detractors have tried to make him.

# REGIMENTAL HISTORIES

History of the Irish Guards in the Second World War. By Major D. J. L. Fitzgerald, M.C. (Gale and Polden, Ltd.) 20s.

Containing a foreword by Field-Marshal Viscount Alexander of Tunis—himself an Irish Guardsman, this admirable War History of 601 pages is easy to read and will be welcomed by all who have been in any way connected with this famous Regiment.

It gives a most detailed account of the exploits of the 1st Battalion in Norway, North Africa and Italy; of the 2nd Battalion in Holland and Boulogne during the early part of the War; and of the 2nd and 3rd Battlions in North-West Europe. It ends with the Roll of Honour and lists of Decorations and Awards. Thirty illustrations and twenty-two maps are included, and there is a good index.

Readers of this book will congratulate the author and also those who, by their excellent war diaries and individual records, have contributed so much to the vivid anecdotes contained within the covers.

Swift and Bold: The King's Royal Rifle Corps in the Second World War, 1939-45.

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Edited by Major-General Sir Hereward Wake, Bart., C.B., C.M.G., D.S.O., and Major W. F. Deedes, M.C. (Gale and Polden.) 258.

This is the story of the King's Royal Rifle Corps in the Second World War as told by the Battalions. It is an account of the part played by these Battalions in the campaigns of Calais, Greece, Crete, the Western Desert, Tunisia, Italy and North-West Europe.

The book has been compiled to place on record the first-hand stories of those who were in direct contact with the enemy. The time has not yet come, nor is all the material available, for a full Regimental History of the War to be written.

Commencing with a useful summary of the war services of each Battalion, and containing numerous illustrations and some essential maps, the book is divided into six Parts covering: Calais, 23rd to 26th May, 1940; the Desert War, August, 1939, to May, 1943; Greece and Crete, March, April and May, 1941; Italy, September, 1943, to September, 1945; North-West Europe, June, 1944, to May, 1945; and the liberation of Greece, October, 1944, to January, 1945. It concludes with four Appendices which contain the Roll of Honour, a list of Honours and Awards, a summary of the services of officers and riflemen not with a Battalion of the Regiment, and a roll of officers, 1939–45.

The London Irish at War. Compiled by a former member of the 1st Battalion, and published on behalf of the London Irish Rifles Old Comrades' Association. 5s.

This history of the London Irish Rifles in World War II, which includes a foreword by Field-Marshal Viscount Alexander of Tunis, commences with a short chapter covering early history, the South African War, the Great War, 1914–18, and the period between that War and 1939.

The remainder of the book is devoted to the training period during the early part of the recent War, and to the subsequent exploits of the 1st and 2nd Battalions in Iraq, Tunisia, Sicily and Italy, with the 56th (London) and 78th Divisions.

The 222 pages are full of interest and contain many good illustrations and sketch maps. The Roll of Honour precedes the foreword and the history ends with a list of Honours and Awards.

# ADDITIONS TO THE LIBRARY

(\* Books for Reference in the Library only.)

# GENERAL

- Secret Forces. The Technique of Underground Movements. By F. O. Miksche. Large Post 8vo. 181 pages. (Faber, 1950.) 15s. Presented by the Publishers. (See Review in this JOURNAL.)
- WAR CRIMES TRIALS. Volume VI. TRIAL OF NIKOLAUS VON FALKENHORST. Formerly Generaloberst in the German Army. Edited by E. H. Stevens. Demy 8vo. 278 pages. (Hodge, 1949.) 18s.
- WAR IN THREE DIMENSIONS. The Impact of Air-Power upon the Classical Principles of War. By Air Vice-Marshal E. J. Kingston-McCloughry. Large Post 8vo. 159 pages. (Cape, 1949.) 10s. 6d. Presented by the Publishers. (See Review in this JOURNAL.)
- WAR DIARY. An Overall War Picture, 1939–1945. By Major F. A. L. de Gruchy. Demy 8vo. 187 pages. (Gale and Polden, 1949.) 7s. 6d. Presented by the Author.
- The Viceroys and Governors-General of India, 1757-1947. By Viscount Mersey. Demy 8vo. 179 pages. (Murray, 1949.) 16s.
- FOR VALOUR. By Kenneth Hare-Scott. Demy 8vo. 178 pages. (Peter Garnett, 1949.)
  10s. 6d. Presented by the Publishers.
  A selection of personal exploits for which the V.C. was awarded.
- Tito. By George Bilainkin. Crown 8vo. 287 pages. (Williams and Norgate, 1949.) 10s. 6d.
- \*The Statesman's Year-Book. Statistical and Historical Annual of the States of the World for the Year 1949. Edited by S. H. Steinberg. Crown 8vo. 1,543 pages. (Macmillan, 1949.) 36s.
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